LP399 Series

IP Phone

User Manual

Version: V1.0

Version directions:

Version	date	Modify content
1.0	2014/02/11	*First release of New v3.0 web page user operation.*

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1. Brief Introduction

1.1. Product Introduction

This user manual is applicable for LP399 series VoIP phone device. The chapter will be targeted device detailed function and web page configuration introduction.

1.2. Hardware Function Introduction

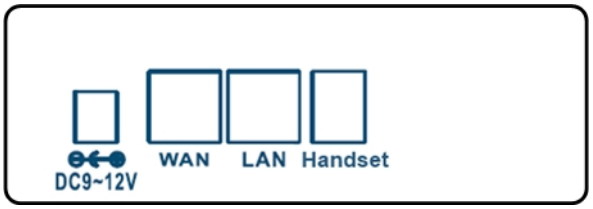
LP399 provided interface: RJ-45 Ethernet port, RJ-9 handset port, LED indication and AC/DC power adaptor connecting seat.

Provided two RJ-45 Ethernet interface, they support 10/100MB Ethernet speed. You can use WAN port to connect ADSL or router; LAN port connects your computer.

1.3. Software Function Introduction

Network Protocol	**Tone**
• SIP v1 (RFC2543), v2(RFC3261) • IP/TCP/UDP/RTP/RTCP • IP/ICMP/ARP/RARP/SNTP • TFTP Client/DHCP Client/ PPPoE Client • Telnet/HTTP Server • DNS Client • IPv4	• Ring Tone • Ring Back Tone • Dial Tone • Busy Tone • User Programming Tone
Codec	**Voice Quality**
• G.711: 64k bit/s (PCM) • iLBC,GSM • G.726: 16k / 24k / 32k / 40k bit/s (ADPCM) • G.729A: 8k bit/s (CS-ACELP) • G.729B: adds VAD & CNG to G.729	• VAD: Voice activity detection • CNG: Comfortable noise generator • LEC: Line echo canceller • Packet Loss Compensation • Adaptive Jitter Buffer
Call	**Phone Function**
• Call Hold • Call Waiting • Call Forward • Caller ID • 3-way conference	• Volume Adjustment • Speed dial, Phone book • Flash • Full-Duplex Speaker Phone
DTMF Function	**Secondsurity**
• In-Band DTMF • Out-of Band DTMF • SIP Info	• HTTP 1.1 basic/digest authentication for Web Setup • MD5 for SIP authentication (RFC2069/ RFC 2617)
SIP Server	**Configuration**
• Registrar Server (three SIP account)	• Web Browser • Console/Telnet • Keypad
IP Assignment	**Firmware Upgrade**
• Static IP • DHCP • PPPoE	• TFTP • Console • HTTP • FTP
QoS	NAT Traversal
• ToS field • VLAN	• STUN
VPN	
• PPTP • L2TP	

1.4. Rear Interface Description

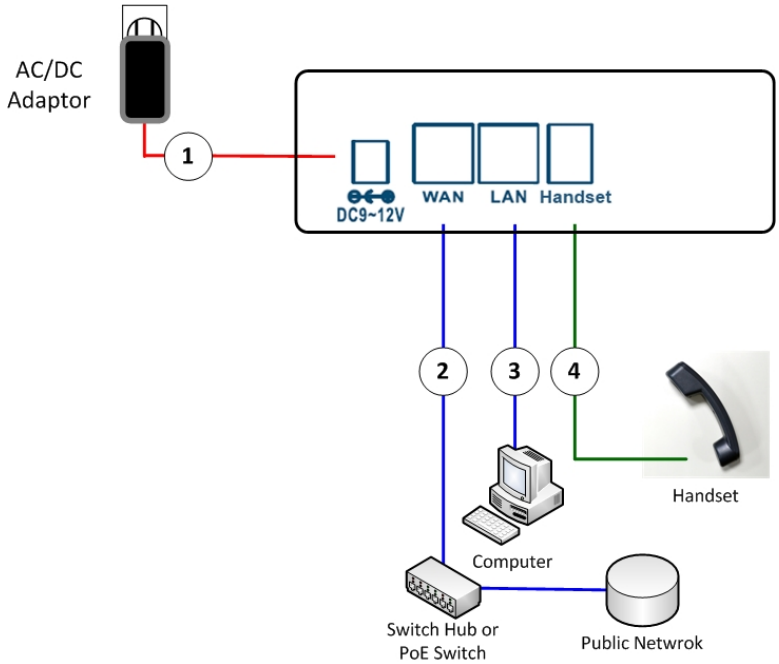


Interface	Explanation
DC 9~12V (Internal-Positive; External-Negative)	Connect AC/DC power adaptor.
LAN	Connect personal computer.
WAN	Connect ADSL or Cable Modem device.
Handset	Handset connection.

1.5. Hardware Installation

After set up the LP399 device, please follow these steps to connect LP399 accordingly.

1. One of the power cord connected to the LP399 AC/DC power adaptor connecting seat, the AC outlet connected to the wall electric outlet.
2. Use LAN port through RJ-45 Ethernet line to connect personal computer.
3. Use RJ-45 Ethernet line to connect LP399 WAN port and ADSL/Cable modem、Router or other switch.
4. The RJ-9 handset line connect LP399 handset.
5. Once the phone power on, the LCD monitor will show the booting word. Wait a few minutes, the LP399 boot completely then you can use LCD or web page to configure your account and phone number.



1.5.1. Network Environment Setting

Netwrok Mode: Default NAT Mode
WAN Port: DHCP Client Mode
LAN Port: DHCP Server Enable, IP Address: 192.168.123.1, Mask: 255.255.255.0

1.5.2. Connection

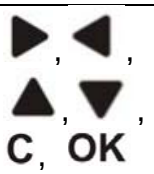
Please connect the personal computer to LP399 LAN port, then set up computer Ethernet to configure DHCP mode. The computer will get DHCP IP address. (ex. 192.168.123.150). Use Web browser at your computer at http://192.168.123.1:9999 to enter webpage setup mode of LP399.

1.6. Basic Operations

1.6.1. Phone function

1.6.1.1. Key function

Key	Explanation	Remark
1	“1”，“-“，“,”，“!”，“?”，“"”，“@”	
2	“2”，“a”，“b”，“c”，“A”，“B”，“C”	
3	“3”，“d”，“e”，”f”，“D”，“E”，“F”	
4	“4”，“g”，“h”，“I”，“G”，“H”，“I”	
5	“5”，“j”，“k”，“l”，“J”，“K”，“L”	
6	“6”，“m”，“n”，“o”，“M”，“N”，“O”	
7	“7”，“p”，“q”，“r”，“s”，“P”，“Q”，“R”，‘S”	
8	“8”，“t”，“u”，“v”，“T”，“U”，“V”	
9	“9”，“w”，“x”，“y”，“z”，“W”，“X”，“Y”，“Z”	
0	“0”，“space”	
*	“*”，“•”，“:”，“＋”	
#	Start the dialing process.	A/a/1 change English Letter upper/lower Case and number.
Conf	a. In talk time, press “Hold” key can retain the phone call immediately. At the same time will hear Dial Tone, User can call to other extension to join 3-party meeting. The third party answers the phone call and press “CONF” key to join 3-way conference call immediately. b. Once caller(LP399) disconnect, the 3rd party call was disconnect either. c. In addition to the caller, any one disconnect and quit 3-party conference call, the caller(LP399) with online people can remain talking.	Three party conference meeting
Pick	a. User hear the nearby phone incoming ringing and press “Pick” key to answer this call from nearby phone. b. Or Off-Hook first, choose talk mode then press “Pick” key to pick up nearby incoming phone call.	Pickup call group

Key	Explanation	Remark
Trans	a. In a talking line, press “Trans” key and dial the transferee number to transfer this call. b. If the transferee number does not answer this call, user can press “Trans” key again to retrieve this call.	Transfer
Redial	a. Press this key to dial the last dialed number automatically. b. In LCD screen, User can use navigation keys to choose a phone number in the dialed list and press “Redial” key to dial out automatically.	Redial the last dial phone number
Hold	In the talk time, press this key to make the call on hold. Then press this key again will unhold or press L1~L3 key unhold this call.	Retention
	a. According to LCD screen’s state, use “up、down、left、right” navigation key to move. b. Press “OK” key to select menu and save Setting. c. Press “C” key to give up this options and don’t saving. Or return to upper layer of the option.	Navigation keys(the arrow keys)
L1, L2, L3	L1, L2, L3 can be registered at different SIP Server or IP-PBX.	Support three lines for SIP account registration.
MENU	Press “MENU” key to enter Menu mode of LCD control display. If you back to previous LCD menu page, Please press “MENU” key again.	
VMS	This function shall cooperate with the SIP Server or IP-PBX. Before use the VMS function, need to Setup IP phone’s VMS dial code. Press this button can enter SIP server VMS and hear voice message.	Vocie Mail Service
CALL IN	Show all incoming call’s nember list.	
CALL OUT	Show all outgoing call’s nember list.	
DND	a. Press this key then LCD will show #DND#, Any incoming call is denied, but call can be dialed out. b. Press this key again, the phone will cancel DND state.	Do Not Disturb
FORWARD	This is the “Forward” function. Forwarding options can be configured here.	
SPEED	This is the “Speed Dial” function.	
PHONE BOOK	This is the “Phone Book” function.	
MUTE	Pess this key at talk time, Phone’s MIC will	Mute(Close the

Key	Explanation	Remark
	disabeled.	Microphone during the phone call.)
	Press this key can enable “Handfree” function (In the “Headset” mode can use this key to “Handfree” mode).	Handfree
Volume -/+	a. Press upper position to increase the volume, or press below to reduce the receiving volume. b. During talk time, the key can adjust the volume. c. With the LCD options, press this key to adjust “Ring Tone” volume.	Volume adjustment

1.6.1.2. LP399 LCD Menu Item

First Layer	Secondsond Layer	Third Layer	Fourth Layer	Explanation
1. Phone Book	1. Search			Search phone book list
	2. Add entry			Add new phone number
	3. Speed Dial			Add new speed dial data
	4. Erase all			Delete all phone book data
2. Call history	1. Incoming Calls			Show all missed call
	2. Dialed numbers			Show all dialed call number
	3. Erase record	1. All		Delete all call records
		2. Incoming		Delete all incoming call records
		3. Dialed		Delete all dialed call number
3. Phone Setting	1.Call forward	All forward	Activation (Enable/Disable)	Start/Stop unconditional forward feature
			Number	Set up forward number
		Busy forward	Activation (Enable/Disable)	Start/Stop busy forward feature
			Number	Set up forward number
		No answer fwd	Activation (Enable/Disable)	Start/Stop no answer feature
			Number	Set up forward number

First Layer	Secondsond Layer	Third Layer	Fourth Layer	Explanation
		Ring Timeout		Set up no answer timeout
	2.Do not Disturb	1.Always	1.Enable 2.Disable	Start/Stop DND incoming call feature
		2.By Period	1.Enable 2.Disable	Start/Stop at the time enable DND feature
		3.Period Time		Set up DND enable time
	3.Alarm Setting	1.Activation	1. Enable 2. Disable	Start/Stop alarm feature
		2.Alarm time		Set up alarm time
	4.Date/Time Setting	1.Date & Time		Set up device time manually
		2.SNTP Setting	1.SNTP	Start/Stop device regulate time automatic
			2.Primary SNTP	Set up first time server location
			3.Secondsondary SNTP	Set up secondsond time server location
			4.Time zone	Set up time zone
			5.Adjustment Time	Set up how often to check time
	5.Volume & Gain,	1.Handset volume		Set up Handset receiving volume
		2.Speaker volume		Set up Speaker volume
		3.Handset gain		Set up Handset microphone gain
		4.Speaker gain		Set up speaker Phone mode microphone gain
	6.Ringer	1. Ringer Volume		Set up “Ring Tone” volume
		2. Ring Type		Set up “Ring Tone” type
	7.Auto dial			Set up auto dial time
4. Network	1.WAN set up	1.IP Type	1.Fixed IP client	Set up fixed IP address manually
			2.DHCP client	Set up IP address automatically
			3.PPPoE client	Use PPPoE feature

First Layer	Secondsond Layer	Third Layer	Fourth Layer	Explanation
		2.Fixed IP Setting	1.IP Address	Set up IP address
			2.Subnet mask	Set up network mask
			3.Default Gateway	Set up network gateway
		3.PPPoE Setting	1.User name	Set up PPPoE user name
			2.Password	Set up PPPoE password
	2.LAN set up	1.Bridge		Set up bridge mode
		2.NAT		Set up NAT mode
	3.DNS	1.Primary DNS		Set up the first DNS server location
		2.Secondary DNS		Set up secondary DNS server location
	4.VLAN	1.Activation	1. Enable 2. Disable	Start/Stop VLAN feature
		2. VID		Setup VLAN ID
	5.Status			Show network state
	6.NETWORK Speed	1.Auto		Set up network speed automatically
		2.100M Full		Set up network speed 100M Full-duplex automatically
		3.100M Half,		Set up network speed 100M Half-duplex automatically
		4.10M Full		Set up network speed 10M Full-duplex automatically
		5.10M Half		Set up network speed 10M Half-duplex automatically
5. SIP Setting *Admin Use	1.Service domain	1.First realm	Activation (Enable/Disable)	First SIP account activation
			Display name	Set up account display name
			Phone number	Set up SIP account phone number

First Layer	Secondsond Layer	Third Layer	Fourth Layer	Explanation
			Auth. name	Set up SIP account register name
			Auth. password	Set up SIP account register password
			Proxy server	Set up Proxy server address
			Domain server	Set up Domain server address
		2.Second realm	Activation (Enable/Disable)	Second SIP account activation
			Display name	Set up account display name
			Phone number	Set up SIP account phone number
			Auth. name	Set up SIP account register name
			Auth. password	Set up SIP account register password
			Proxy server	Set up Proxy server address
			Domain server	Set up Domain server address
		3.Third realm	Activation (Enable/Disable)	Third SIP account activation
			Display name	Set up account display name
			Phone number	Set up SIP account phone number
			Auth. name	Set up SIP account register name
			Auth. password	Set up SIP account register password
			Proxy server	Set up Proxy server address
			Domain server	Set up Domain server address
	2.Status	First realm		First register account state
		Second realm		Second register account state

First Layer	Secondsond Layer	Third Layer	Fourth Layer	Explanation
		Third realm		Third register account state
6. Administrator	1.Auto config *Admin Use	1.Disable		Disable provision update automatically
		2.TFTP		Use TFTP mode
		3.FTP		Use FTP mode
		4.HTTP		Use HTTP mode
	2.Upgrade system	1.Upgrade Now	1. Yes 2. No	Execute/Cancel upgrade automatic
		2.Upgrade via *Admin Use	1.Disable	Stop upgrade automatically feature
			2.TFTP	Use TFTP mode
			3.FTP	Use FTP mode
			4.HTTP	Use HTTP mode
		3.Status	No new s/w Next=xx-xx xx:xx	Show state and next upgrade time
		4.Reset Time	1. Yes 2. No	Reset/Stop upgrade time automatically
	3.Default Setting	1.Load default		Start reset to default configuration
		2.Abort		Stop reset to default configuration
	4.System Authent			Set up system permissions
	5.Version			Device version information
	6.LCD Language	1.English		LCD English interface
		2.Portugal		LCD Portugal interface
	7.Restart			Restart device
	8.Auto Reboot	1. Enable		Enable auto reboot feature
		2. Disable		Disable auto reboot feature

*Admin Use: Enter LCD menu 6.Administrator > 4.System Authent, Then use the LP399 administrator's password to login. After login, You can enter this option and modify settings.

1.6.2. Dial function Introduction

1.6.2.1. LP399 Dial Feature

There are three ways to dial number :

1. Select L1~L3 line, After dial number direct, press "**#**" key to dial out immediately.
2. Select L1~L3 line. Enter phone number and wait for 3 seconds to dial out automatically. (Default)
3. In ON-Hook state, Dial number and use **C** key to modify wrong number. After checking correct number, press **#** key to dial out.

Example:

- Dial other extension number at the same proxy server, for instance, 1008. Just pick up the phone and dial number 1008, than press "**#**" key or wait 3 seconds to dial out.
- Dial a PSTN number, ex. 0800024365, maybe need to add prefix code before the phone number.

Remark:

- In the LP399 web management system "Phone" -> "Dial Plan - Basic" web page, check [Dial Plan - Basic] page parameter [Key As Send #], the Settings is Enable or not.

1.6.2.2. Point-to-Point(P2P) Dial Feature

Two LP399 IP-Phone devices can call directly without SIP proxy server registration mode.
Environmental requirements:

- Both LP399 IP-Phone device need to use physical static network IP address ; or at the same private LAN network environment, or in a same VPN network.

Example:

- If the called LP399 IP address is 192.168.0.160, dial number as follows:
  Pick up the phone, dial "192*168*0*160", then press "#" or wait 3 seconds to finish the P2P call.
- If the called LP399 IP address is 192.168.1.20 and port is 5062, dial number as follows:
  Pick up the phone, dial "192*168*1*20**5062", then press "#" or wait 3 seconds to finish the P2P call.

1.6.2.3. Hold Call

In the talking state, press **[Hold]** key, the phone call will retain immediately. Then, user can select other line to make a new call.

1.6.2.4. Call Waiting

In the talking state, If user hear a call waiting tones and LP399 LCD show a new incoming call number at the same time. User can press **[Hold]** key to retain original call and answer waiting call. During the talking state, User can press **[Hold]** key again, the original call will be connected.

1.6.2.5. Blind Transfer

If user 『A』 and 『B』 are in a phone call, 『A』 will transfer this phone to user 『C』:

1. 『A』 press **[Trans]** on LP399 device, then 『A』 can hear dial tone.
2. 『A』 enter user 『C』 phone number and press "#" Key (Or wait for 3 seconds).
3. 『A』 can hand up the phone.

1.6.2.6. Attendant Transfer (Answer then Transfer)

If user 『A』 and 『B』 are in a phone call, 『A』 will transfer this phone call and talk to user 『C』:

1. 『A』 press **[Hold]** key, then hear dial tone.
2. 『A』 dial 『C』 phone number and press "#" key (Or wait for 3 seconds).
3. The user 『C』 answer the call and after talk was finished. Then 『A』 press **[Transfer]** key to complete the transfer feature.
4. If the user 『C』 doesn't answer, 『A』 can press **[Hold]** key to return the phone call, then talk

『B』.

1.6.2.7. Conference Call (3-way calling)

If user 『A』 and 『B』 are in a phone call, 『A』 want 『C』 to join this meeting:

1. 『A』 press **[Hold]** key, and hear dial tone.
2. 『A』 dial 『C』 phone number and press "#" key (Or wait for 3 seconds).
3. The user 『C』 answer the call and talk. Then 『A』 press **[Conf]** key to complete the 3-party conference feature. Now 『A』、『B』、『C』 can talk in a 3-party conference room.
4. If the user 『C』 does not answer, 『A』 can press **[Hold]** key to return the phone call, then talk to 『B』.
5. During the conference call, If 『A』 hand up the phone call, the conference feature will be canceled, the 『B』、『C』 disconnected immediately.

2. Web Page

2.1. Web Login Level Table

Web Page Menu	Administrator	System	Normal
Status	Yes	Yes	Yes
Phone			
➢ Phone Book	Yes	Yes	Yes
➢ Speed Dial	Yes	Yes	Yes
➢ Dial Plan – Basic	Yes	Yes	No
➢ Dial Plan – Advanced	Yes	Yes	No
➢ Call Service (Phone Feature)	Yes	Yes	Yes
➢ General (Normal Setting)	Yes	Yes	Yes
➢ Volume (Volume Setting)	Yes	Yes	Yes
Network			
➢ WAN (Public Ethernet)	Yes	Yes	Yes
➢ DDNS (Dynamic DNS)	Yes	Yes	Yes
➢ VLAN (VLAN Environment)	Yes	Yes	No
➢ VPN (PPTP/L2TP Link)	Yes	Yes	No
➢ NTP (Time Environment)	Yes	Yes	No
NAT			
➢ LAN (LAN Network)	Yes	Yes	Yes
➢ DMZ & Mac Clone (DMZ and MAC Setting)	Yes	Yes	Yes
➢ Virtual Server (Virtual Proxy Server)	Yes	Yes	Yes
SIP			
➢ Service (SIP Register)	Yes	Yes	No
➢ Codec (Voice Format)	Yes	Yes	No
➢ Advanced (Other Setting)	Yes	No	No
➢ STUN (STUN & Fource Setting)	Yes	Yes	No
Management			
➢ Status Log (System State)	Yes	Yes	Yes
➢ Auto Provision (Auto Config Setting)	Yes	Yes	No
➢ Auto Update (Auto Upgrade Firmware)	Yes	Yes	No
➢ Firmware (Firmware Upgrade)	Yes	Yes	No
➢ Advanced (Advance Setting)	Yes	No	No
➢ Password (Login User/Password)	Yes	Yes	No
➢ Tones (Frequency Setting)	Yes	No	No
➢ Default (Reset To Default)	Yes	Yes	No
➢ Language (Language Setting)	Yes	Yes	Yes
Save & Reboot	Yes	Yes	Yes
Logout	Yes	Yes	Yes
Engineer	Yes	No	No
Update	Yes	No	No

2.2. Login LP399 Web Page

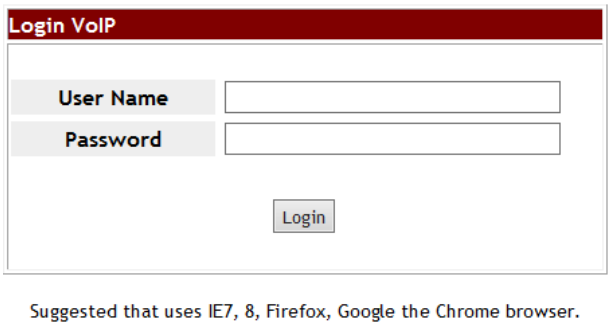
LP399 Web Login IP address from LAN port default value is, http://192.168.123.1:9999

- Login Accout:
  - Administrator account: root, password: test
  - System account: system, password: test
  - Normal account: user, password: test

2.2.1. Functions

Provide login LP399 system management page.

2.2.2. Instruction



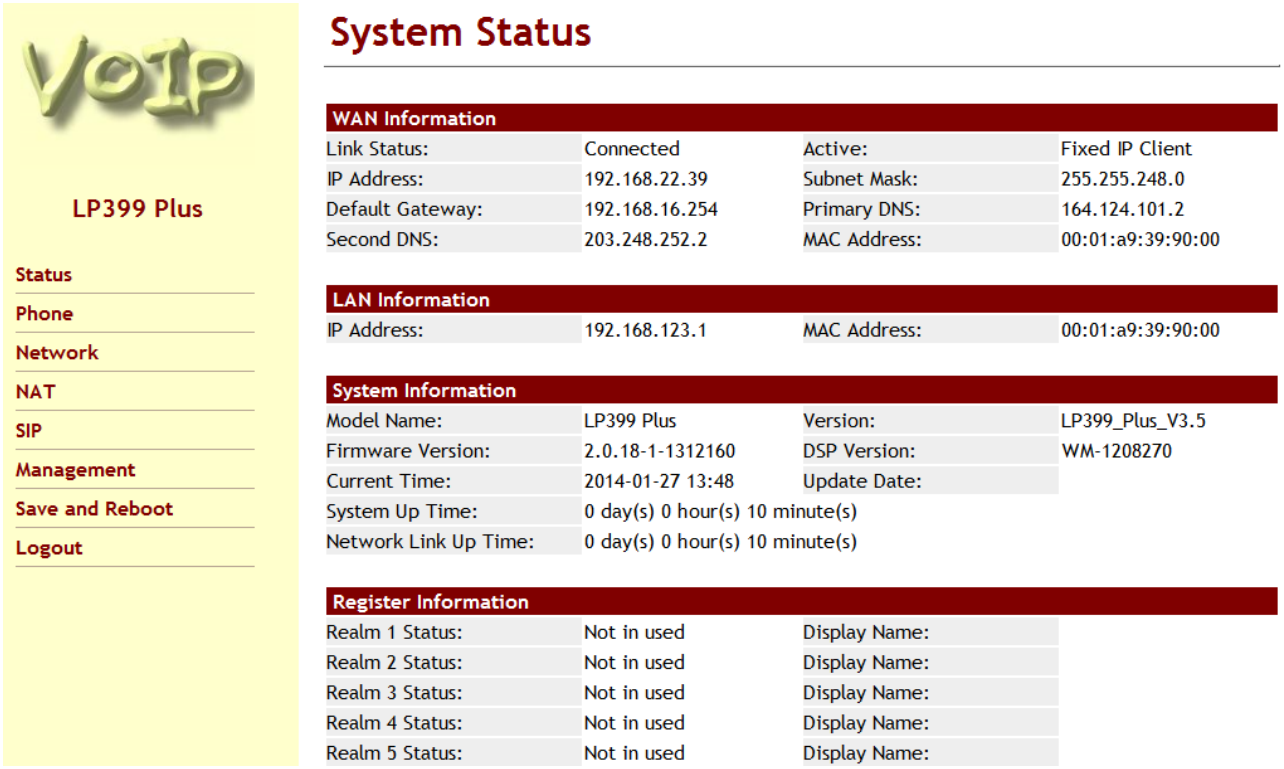
User Name	Enter user name, can be numeral or letters.
Password	Enter password, can be numeral or letters.
Login [Button]	Login LP399 system web page.
Clear [Button]	Clear all information.

2.3. VoIP Setup Manu

2.3.1. Functions

Provide functions menu [Status (System information), Phone (Telephony environment), Network (Network environment), NAT (Network Address Translation), SIP (Register environment), Management (Advance Setting), Save & Reboot (Configuration save and reboot device), Logout (Logout web page)].

2.3.2. Instruction



Item	Explanation
Phone	Shows device type.
Status	Provide status of the System.
Phone	Phone (Telephony environment) Provide function menu[Phone Book, Speed Dial, Dial Plan – Basic, Dial Plan – Advanced, Call Service (Phone function), General (Normal Setting), Volume (Volume Setting)].
Network	Provide [WAN, DDNS, VLAN, VPN(PPTP/L2TP), SNTP] functions.

Item	Explanation
NAT	Provide [LAN, DMZ & Mac Clone, Virtual Server] functions.
SIP	Provide [Service, Code, Advanced, STUN (STUN & Force Setting)] functions.
Management	Provide [Status Log, Auto Config, Auto Update, New Firmware , Advanced, Password, Tones, Default, Language] functions.
Save & Reboot	Provide [Save, Reboot] functions.
Logout	Logout the system.

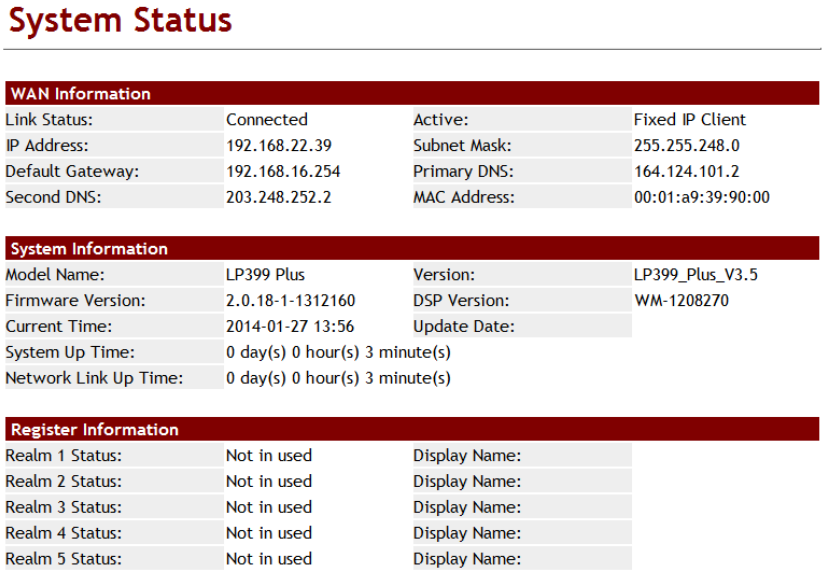
2.4. Status (System Information)

2.4.1. Functions

Show status of Network, Firmware Version and SIP registration.

2.4.2. Instruction

Figure 1: LAN Port Device Active: Bridge

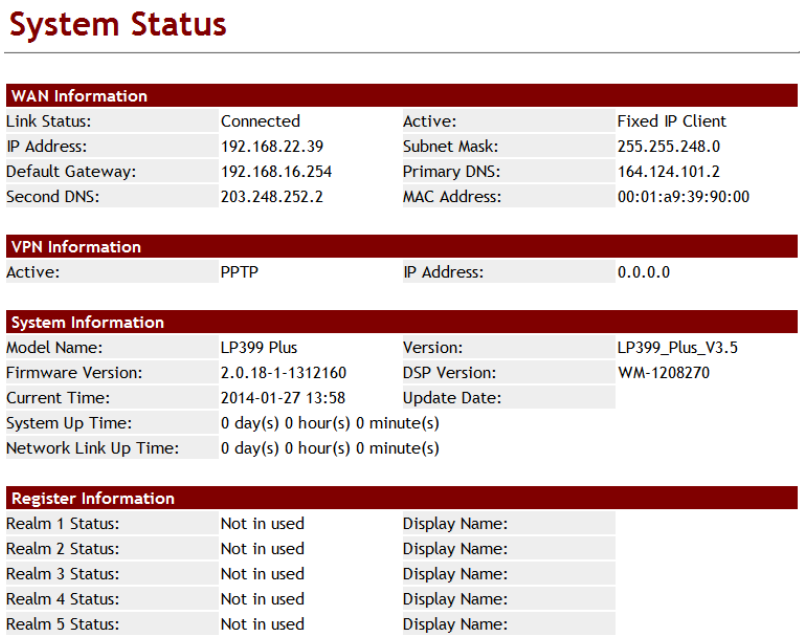


(Figure 1)

Item	Explanation
WAN Information	Shows the status of WAN Port.
Link Status	Shows the network connected Speed.
Active	Shows the network connected type.
IP Address	Shows IP address of the device.
Subnet Mask	Shows the subnet mask.
Default Gateway	Shows the default gateway.
Primary DNS	Shows the primary DNS server.
Secondsond DNS	Shows the secondsondary DNS server.
MAC Address	Shows the MAC ID.
System Information	Shows the status of System.
Model Name	Show LP399 model name.
Version	Show LP399 firmware version.
Firmware Version	Shows the firmware version for software control.
DSP Version	Shows the DSP version. AC: AC97 WM: Winbound LE: Legeeity NV:Nuvoton
Current Time	Shows the current time.

Item	Explanation
Update Date	Shows the date of updating system.
System Up Time	Shows the system running time.
Netwrk Link Up Time	Shows the network running time.
Register Information	Shows the status of SIP register.
Realm 1 Status	Shows the line 1 register state.
Display Name	Shows the line 1 register number.
Realm 2 Status	Shows the line 2 register state.
Display Name	Shows the line 2 register number.
Realm 3 Status	Shows the line 3 register state.
Display Name	Shows the line 3 register number.

Figure 2: LAN Port Device Active: Bridge + VPN

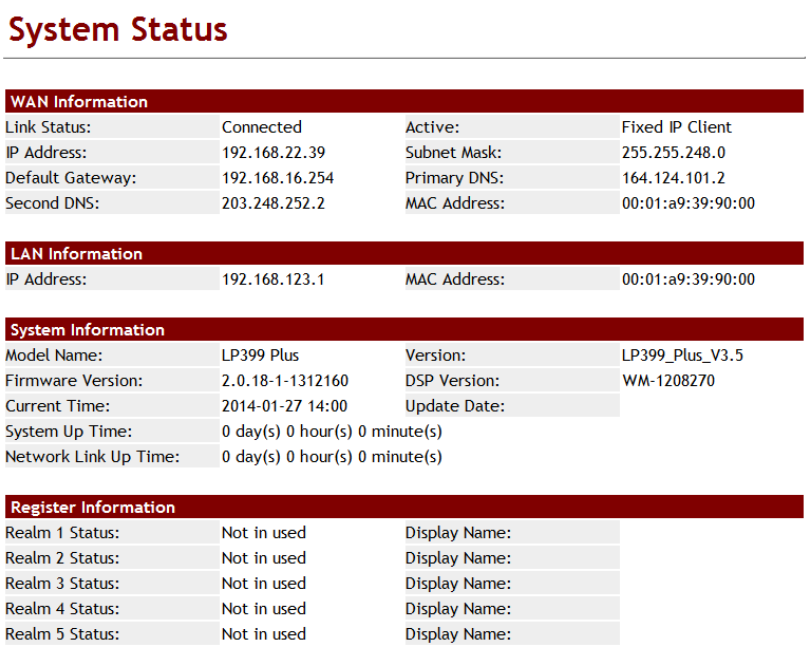


(Figure 2)

Item	Explanation
WAN Information	Shows the statuses of WAN Port.
Link Status	Shows the network connected Speed.
Active	Shows the network connected type.
IP Address	Shows IP address of the device.
Subnet Mask	Shows the subnet mask.
Default Gateway	Shows the default gateway.
Primary DNS	Shows the primary DNS server.
Secondsond DNS	Shows the secondsondary DNS server.
MAC Address	Shows the MAC ID.
VPN Information	Shows the status of VPN (PPTP/L2TP)
Active	Shows the VPN connected type.
IP Address	Shows the VPN IP address.
System Information	Shows the status of System.
Model Name	Show LP399 model name.
Version	Show LP399 firmware version.
Firmware Version	Shows the firmware version for software control.
DSP Version	Shows the DSP version.

	AC: AC97 WM: Winbound LE: Legeeity NV:Nuvoton
Current Time	Shows the current time.
Update Date	Shows the date of updating system.
System Up Time	Shows the system running time.
Network Link Up Time	Shows the network running time.
Register Information	Shows the status of SIP register.
Realm 1 Status	Shows the line 1 register state.
Number	Shows the line 1 register number.
Realm 2 Status	Shows the line 2 register state.
Number	Shows the line 2 register number.
Realm 3 Status	Shows the line 3 register state.
Number	Shows the line 3 register number.

Figure 3: LAN Port Device Active: Router

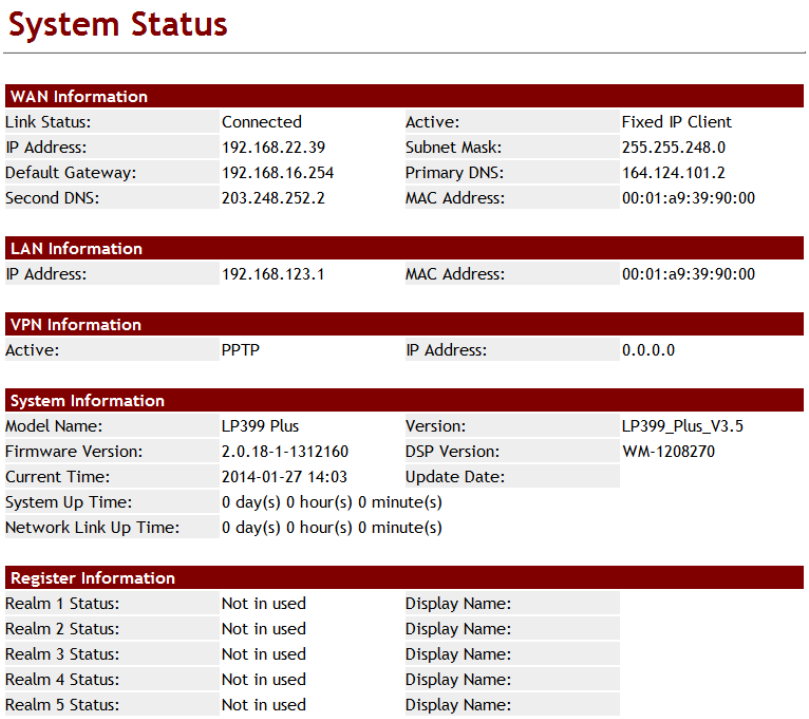


(Figure 3)

Item	Explanation
WAN Information	Shows the statuses of WAN Port.
Link Status	Shows the network connected Speed.
Active	Shows the network connected type.
IP Address	Shows IP address of the device.
Subnet Mask	Shows the subnet mask.
Default Gateway	Shows the default gateway.
Primary DNS	Shows the primary DNS server.
Secondsond DNS	Shows the secondsondary DNS server.
MAC Address	Shows the MAC ID.
LAN Information	Shows the status of LAN Port.
IP Address	Shows the LAN IP address.
MAC Address	Shows the LAN MAC ID.
System	Shows the status of System.

Item	Explanation
Information	
Model Name	Show LP399 model name.
Version	Show LP399 firmware version.
Firmware Version	Shows the firmware version for software control.
DSP Version	Shows the DSPversion. AC: AC97 WM: Winbound LE: Legeeity NV:Nuvoton
Current Time	Shows the current time.
Update Date	Shows the date of updating system.
System Up Time	Shows the system running time.
Netwrk Link Up Time	Shows the network running time.
Register Information	Shows the statuses of SIP register.
Realm 1 Status	Shows the line 1 register state.
Number	Shows the line 1 register number.
Realm 2 Status	Shows the line 2 register state.
Number	Shows the line 2 register number.
Realm 3 Status	Shows the line 3 register state.
Number	Shows the line 3 register number.

Figure 4: LAN Port Device Active: Router + VPN



(Figure 4)

Item	Explanation
WAN Information	Shows the statuses of WAN Port.
Link Status	Shows the network connected Speed.
Active	Shows the network connected type.

Item	Explanation
IP Address	Shows IP address of the device.
Subnet Mask	Shows the subnet mask.
Default Gateway	Shows the default gateway.
Primary DNS	Shows the primary DNS server.
Secondsond DNS	Shows the secondsondary DNS server.
MAC Address	Shows the MAC ID.
LAN Information	Shows the statuses of LAN Port.
IP Address	Shows the LAN IP address.
MAC Address	Shows the LAN MAC ID.
VPN Information	Shows the statuses of VPN (PPTP/L2TP)
Active	Shows the VPN connected type.
IP Address	Shows the VPN IP address.
System Information	Shows the statuses of System.
Model Name	Show LP399 model name.
Version	Show LP399 firmware version.
Firmware Version	Shows the firmware version for software control.
DSP Version	Shows the DSP version. AC: AC97 WM: Winbound LE: Legeeity NV:Nuvoton
Current Time	Shows the current time.
Update Date	Shows the date of updating system.
System Up Time	Shows the system running time.
Netwrk Link Up Time	Shows the network running time.
Register Information	Shows the statuses of SIP register.
Realm 1 Status	Shows the line 1 register state.
Number	Shows the line 1 register number.
Realm 2 Status	Shows the line 2 register state.
Number	Shows the line 2 register number.
Realm 3 Status	Shows the line 3 register state.
Number	Shows the line 3 register number.

2.5. Phone (Telephony environment)

Provide functions of [Phone Book, Speed Dial, Dial Plan – Basic, Dial Plan – Advanced, Call Service, Genereal, Volume].

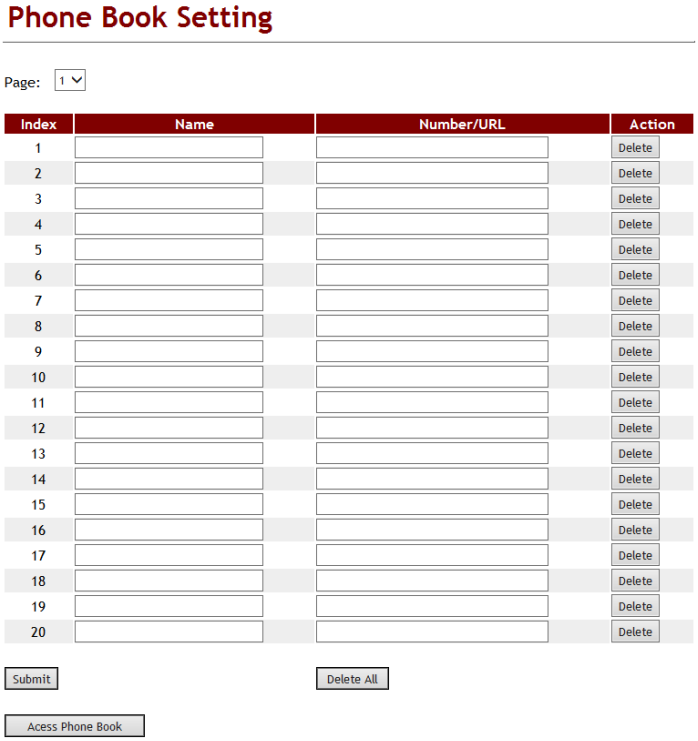
2.5.1. Phone Book

2.5.1.1. Functions

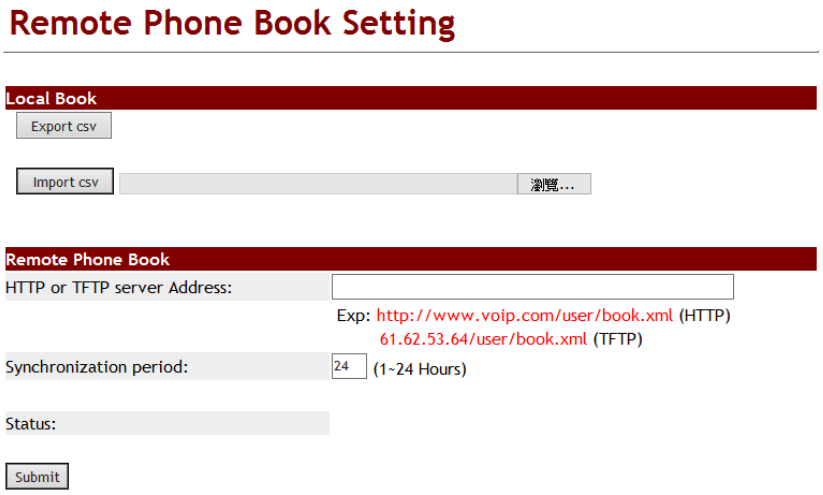
Phone Book can provide 140 entries; Export/Import feature, the file format is csv.

When user A dials a [Name], Phone Book will check it on Phone Book. If system finds it, it will dial the [Number] of [Name]. If the [Name] is not on Phone Book, system will dial the number you have dialed.

2.5.1.2. Instruction



Item	Explanation
Page	Default: Page 1. Select the page, from Page1~Page7.
Index	Shows the serial number. 140 entries in total, from Phone 0~139. One page has 20 entries.
Name	Set up the user's name. These columns provide the function of speed dial by only enter numbers; maximum length is 31 bytes.
Number/URL	Set up the user's number. These columns can enter numbers and strings; maximum length is 63 bytes. Ex: 0212345678, 0800024365, www.dyndns.info
Action	Provide [Delete] button to erase the datas.
Submit [Button]	Save the Settings.
Delete All	Reset all data.
Acess Phone Book	Enter "Remote Phone Book Setting" web page.
Export csv [Button]	Export [Phone Book] data, the file format is 『.csv』.
Import csv [Button]	Import [Phone Book] data, the file format is 『.csv』.



Item	Explanation
Export csv [Button]	Export [Phone Book] data, the file format is 『.csv』.
Import csv [Button]	Import [Phone Book] data, the file format is 『.csv』.
HTTP or TFTP Server Address	Use HTTP or TFTP server to upgrade LP399's phone book data.
Synchronlzation period	The LP399 will reference this time to upgrade phone book data at HTTP or TFTP server by itself.
Submit [Button]	Save the Settings.

2.5.1.3. Operate Instruction

Example 1: Setup [Phone Book] data

Step 1: On the [Phone Book Setting] page, Setup [Index: 1, Name: 301, Number: 301@192.168.1.2; Index: 2, Name: 206, Number: 1747643364; Index: 3, Name: test, Number: 8123478944566] (See Figure 1).

Index	Name	Number/URL	Action
1	301	301@192.168.1.2	Delete
2	206	1747643364	Delete
3	test	8123478944566	Delete

(Figure 1)

Instruction 1: Dial [301], system find the [301] on Index 1, then system dial Name's Number of Index 1. System will dial [192.168.1.2]

Instruction 2: Dial [206], system find the [206] on Index 2, then system dial Name's Number of Index 2. System will dial [17476433364].

Instruction 3: Because Index 3's Name is a string, so the speed dial function can not be used, you can just check the Index 3' Name and Number.

Example 2: Export / Import [Phone Book] data

◆ Export Feature

Step 1: In [Phone Book Setting] web page, the page have two numbers data. (See Figure 2).

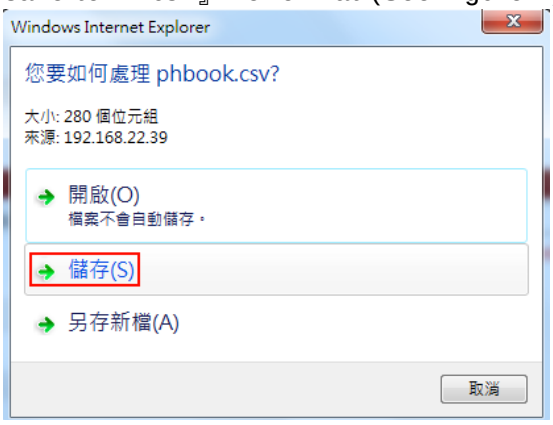
Index	Name	Number/URL	Action
1	May	2206	Delete
2	Rod	2203	Delete
3			Delete

(Figure 2)

Step 2: To perform the export function, please press [Export csv] button (See Figure 3).

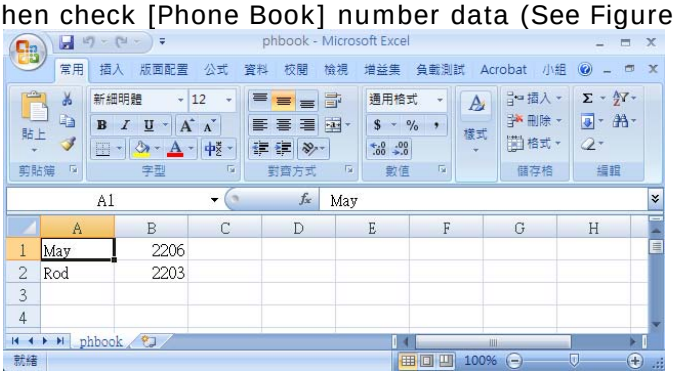
(Figure 3)

Step 3: Monitor show [File Download] page, default file name is phbook.csv, select [Save] button, LP399 parameter will save to 『.csv』file format (See Figure 4).



(Figure 4)

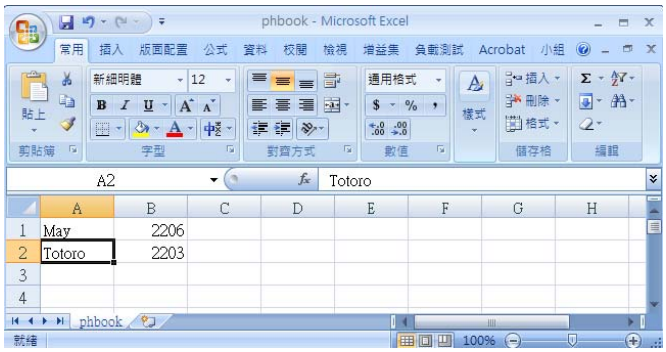
Step 4: Open the file, then check [Phone Book] number data (See Figure 5).



(Figure 5)

◆ Import Featuer

Step 1: Set up 『.csv』 format for [Phone Book] data (See Figure 6).



(Figure 6)

Step 2: In [Phone Book Setting] web page, choose the phone book file data to load [example: F:\Test\phbook.csv], press [Import csv)] button (See Figure 7).

(Figure 7)

Step 3: Load data finish, [Index: 1 and 2] will show phone book data (See Figure 8).

Index	Name	Number/URL	Action
1	May	2206	Delete
2	Totoro	2203	Delete
3			Delete

(Figure 8)

Example 3: LP399 LCD Monitor Function

Step 1: In [Phone Book Setting] web page, Setup [Index: 1, Name: Cat 1, Number/URL: 102, Index: 2, Name: Me To, Number/URL: 103] (See Figure 9).

Index	Name	Number/URL	Action
1	Cat 1	102	Delete
2	Me To	103	Delete

(Figure 9)

Step 2: In [Service Domain Setting] web page, Setup [Realm Active: Enable, Display Name: 102, Phoner Number: 102, Authentication ID: 102, Authentication Password: test, Domain Server: 192.168.68.150, Proxy Server: 192.168.68.150] (See Figure 10)。

Note : Both registered account [Display Name] and [Authentication ID] must be the same (See Figure 10) to take effect.

Realm Active:	Enable
Display Name:	102
Phone Number:	102
Authentication ID:	102
Authentication Password:	••••••••••••••••
Domain Server:	192.168.68.150
Proxy Server:	192.168.68.150
Subscribe for MWI :	Disable

(Figure 10)

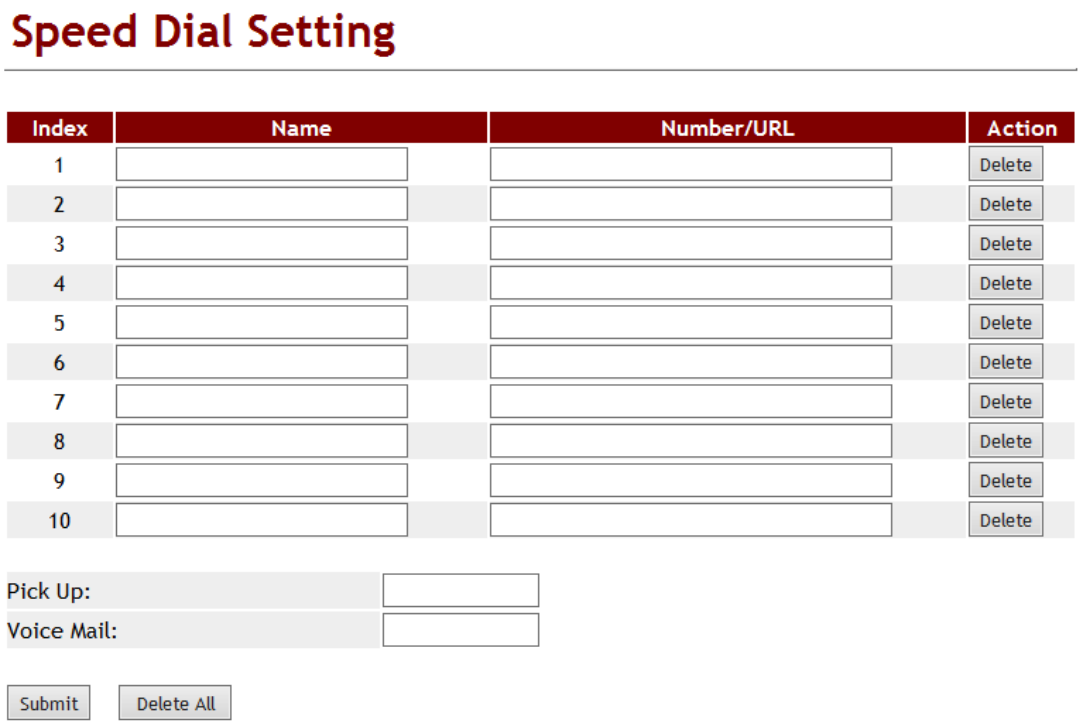
Step 3: When LP399 receives 102 incoming call, LCD can show [Me To, 102] incoming call message automatically.

2.5.2. Speed Dial

2.5.2.1. Functions

Provide to Set [Pick-up] and [Voice Mail] key code. If there is no function key corresponding, The service can't take effect.

2.5.2.2. Instruction



Item	Explanation
Index	This Index number is the one on LCD icon number.
Name	Set up extension account data. These columns can enter numbers and strings; maximum length is 31 bytes.
Number/URL	Set up the user's number. These columns can enter numbers and strings; maximum length is 63 bytes.
Action	Provide [Delete] button to clear Setting data.
Pick Up	Setup [Pick Up] feature code. This code must be compatible with IP-PBX server Pick-Up code. These columns can enter numbers and strings (*#), maximum length is 15 bytes.
Voice Mail	Set up [Voice Mail] feature code. This code must be compatible with IP-PBX server [Voice Mail] service code. These columns can enter numbers and strings (*#), maximum length is 15 bytes.
Submit [Button]	Save the Settings.
Delete All [Button]	Reset all data.

2.5.2.3. Operate Instruction

Example 1: [Pick Up & Voice mail] Button

Step 1: In [Speed Dial Setting] web page, Setup [Pick up: *98, Voice Mail: *97] (See Figure 1).

Pick Up:	*98
Voice Mail:	*97

(Figure 1)

Description 1: Need to pick up nearby ring phone call, please press LP399 **[Pick]** key, LP399 will pick up nearby ringing phone (This phone must stay at the same pick up group).

Description 2: Execution and listen voice mail messages, press **[VMS]** key to enter voice mail process.

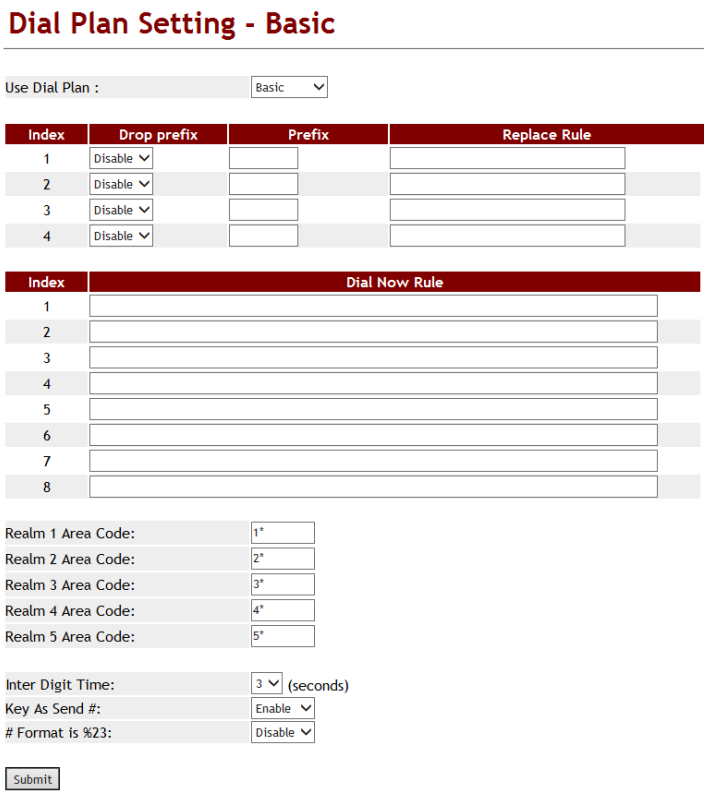
2.5.3. Dial Plan - Basic

2.5.3.1. Functions

Dial Plan Provide Dial Now, Realm Prefix, Auto Dial Time, Use # as send Key.

2.5.3.2. Instruction

Figure 1: LP399 device



(Figure 1)

Item	Explanation
Use Dial Plan	Default is Basic dial plan Setting. Select dial function mode. When select Advanced, the dial function will use Dial Plan - Advanced web page Setting. Provide drop-down options: Basic, Advanced. Basic: Use basic web page Dial Plan and Dial Now rules. Advanced: Use Dial Plan - Advanced rules; Disabled [Dial Plan & Dial Now] Setting field automatically.
Dial Plan	Setup dialing properties to add number or Replace Number.
Index	Shows the serial number. Provide 4 sets to add numbers or drop numbers.

Item	Explanation
Drop Prefix	Default: Disable。 When Setting up Enable and encountering the matched rule, the [Prefix] will be replaced by the dialing number。 When Setting up Disable, and encountering the matched rule, the [Pefix] will be added in front of the dialing number.
Prefix	Setup the number to add or drop. These clolumes can enter numbers; maximum length is 8 bytes.
Replace Rule	Setup the matched rule. This column can enter numbers or signs; maximum length is 40 bytes. Sign: [+, x]. + represents "or". For example: 123+456+334+5xx, it represents "123" or "456" or "334" or "5xx". x: 0~9, for example: 5xx，if the first dialing number is "5", [Prefix] will replace or add it. Note: This dial rule is 『x+number』combination. If the dial number is fully compliance with the code length, the dial replace rule does not running.
Dial Now	Setup speed dial specification rules.
Index	Shows the serial number. Provide 8 sets for Dial Plan.
Dial Now Rule	Provide the rules for dialing at once. When encountering the matched rule, system will dial number at once without receiving "#" or waiting past [Auto Dial Time]. This column can enter numbers or signs; maximum length is 80 bytes. Sign: [*, #, +, x]. + represent "or". x: 0~9.
Realm 1 Area Code	Deafult: 1*; Change to use first [Realm] account.
Realm 2 Area Code	Deafult: 2*; Change to use second [Realm] account.
Realm 3 Area Code	Deafult: 3*; Change to use third [Realm] account.
Realm 4 Area Code	Deafult: 4*; Change to use fourth [Realm] account.
Realm 5 Area Code	Deafult: 5*; Change to use fifth [Realm] account.
Inter Digit Time	Default: 3 seconds. After waiting for a while, but didn't enter any number, Auto Dial will run automatically. Inter Digit Time period: (3~9 seconds). Provide option 3~9.
Key As Send#	Default: Enable. Configure # key as Send Out command key after dial number. If you select Disable at this option, The dial number will wait for your desire Inter Digit Time to send out.
# Format is %23	Default is Disable; Use [#] word to send %23 singal. Provide drop-down options: Disable, Enable. Enable: Use [#] word to send %23 singal.
Submit [Button]	Save the Settings.

2.5.3.3. Operate Instruction

Example 1: Drop Prefix & Dial Now Function

Step 1: In [Dial Plan Setting] web page, Setup [Use Dial Plan: Basic, Index: 1, Drop prefix: Disable, Prefix: 002, Rule: 8613+8662; Index: 2, Drop prefix: Enable, Prefix: 006, Rule: 002+003+004+005+007+009; Index: 3, Drop prefix: Disable, Prefix: Replace: 009, Rule: 12; Index: 4, Drop prefix: Disable, Prefix: 007, Rule: 53+35xx +21xx.
Index: 1, Dial Now Rule: *xx +#xx+11x +xxxxxxxx] (See Figure 1).

Index	Drop prefix	Prefix	Replace Rule
1	Disable	002	8613+8662
2	Enable	006	002+003+004+005+007+009
3	Disable	009	12
4	Disable	007	53+35xx+21xx

Index	Dial Now Rule
1	*xx+#xx+11xx+xxxxxx
2	

(Figure 1)

Instruction 1:

Application 1: When dialing [8613xxxx], all numbers that begin with 8613, will be added with 002, so actually the dialing number is [002+8613+xxx].

Application 2: When dialing [8662xxxx], all numbers that begin with 8662, will be added with 002, so actually the dialing number is [002+8662+xxx].

Instruction 2:

Application 1: When enter [002+86xxxx] and all numbers that begin with 002 will be replaced by 006; so actually the dialing number is [006+86xxx].

Application 2: When enter [003+77xxxx] and all numbers that begin with 003 will be replaced by 006; so actually the dialing number is [006+77xxx].

Instruction 3: Drop prefix: Disable, Replace rule: 009, Rule: 12。

Application 1: When enter [12xxxx], and all numbers that begin with 12, will be added with 009; so actually the dialing number is [009+12+xxx].

Instruction 4:

Application 1: When enter [53789], and all numbers that begin with 53, will be added with 007; so actually the dialing number is [007+53789].

Application 2: When enter [3507], and all numbers that begin with 35, will be added with 007; so actually the dialing number is [007+3507].

Application 3: When enter [2199], and all numbers that begin with 21, will be added with 007; so actually the dialing number is [007+2199].

Instruction 5:

Application 1: Any information that meet the condition "*xx" will be sent out immediately, like [*00, *01, *02… *99].

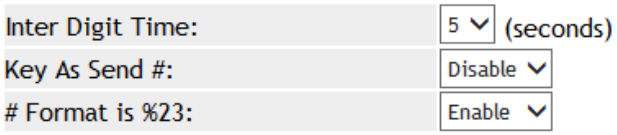
Application 2: Any information that meet the condition" #xx" will be sent out immediately, like [#00, #01, #02…#99].

Application 3: Any information that meet the condition "11x" will be sent out immediately, like [110, 111, 112 … 119].

Application 4: If enter 8 digit numbers, the system will send out the number immediately. E.g.: 12345678.

Example 2: # Format is %23 Function

Step 1: In [Dial Plan Setting] web page, Setup [Key As Send#: Disalbe, # Format is %23: Enable] (See Figure4).



(Figure 4)

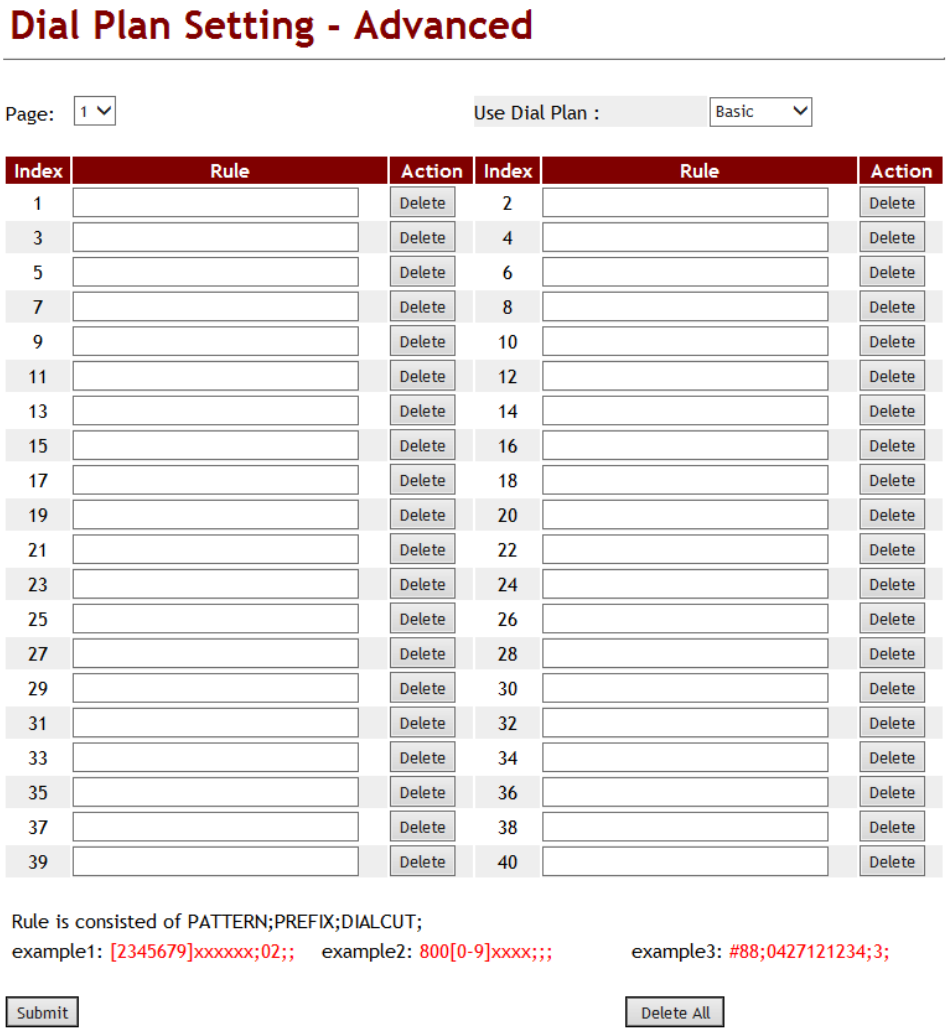
Step 2: Pick up the handset, Dial [123#], the correct dialing content is [123%23].

2.5.4.Dial Plan – Advanced

2.5.4.1. Functions

Provide advanced Setting: Add number and Drop number or Speed Dial function rules.

2.5.4.2. Instruction



(Figure 1)

Item	Explanation
Use Dial Plan	Default is Basic ; Select dial function mode. When select Advanced, the dial function will use Dial Plan - Advanced web page Setting. Provides drop-down options: Basic, Advanced. Basic: Use basic web page Dial Plan & Dial Now rules. Advanced: Use Dial Plan - Advanced rules; Disabled [Dial Plan & Dial Now] Setting field automatically.

Item	Explanation
Page	Default is 1. Select pages, Provide drop-down options: 1~5.
Index	Shows the serial number. 200 entries in total, from Phone 0~139. A page have 40 entries.
Rule	Setup Add / Drop code or Speed Dial rules. User can enter numbers or symbols (only support: 0~9, *, #, -, x, [,], ;). Maximum length is 32 bytes. Data format: PATTERN;PREFIX;DIALCUT; The "**;**" is entered as location separator. It is always needed in this rule. PATTERN: Enter Add / Drop code or Speed Dial rules (only support: 0~9, *, #, -, x, [,], ;); maximum length is 20 bytes. When the dial number meet dialing rules field, user don't use the [#] key, the device will dial the phone number automatically. PREFIX: Enter the phone number user need to Add code, (only support: 0~9, *, #), or keep null; maximum length is 20 bytes. DIALCUT: Enter the phone number user need to drop code 『quantity』, (only support: 0~9), or keep null; maximum length is 2 bytes. Example 1: Rule: [2345679]xxxxxx;02;; 。 Example 2: Rule: 800[0-9]xxxx;;; Example 3: Rule: #88;0427121234;3;
Submit [Button]	Save the Settings.

2.5.4.3. Operate Instruction

Example 1: Index: 1, Rule: [2345679]xxxxxx;02;;

Step 1: In [Dial Plan Setting - Advanced] web page, Setup [Use Dial Plan: Advanced, Index: 1, Rule: [2345679]xxxxxx;02;;] (See Figure 1).

(Figure 1)

Instruction 1: When dial number is [2+123456], Meet [Rule] field parameter [2345679]xxxxxx rules, Stop to receive number immediately; Add prefix code [02] before [2+123456] automatically. Actually sending number is [02+2+123456] (See Figure 1)。

Instruction 2: When dialing content [3+123456] at the beginning, Meet [Rule] field [2345679]xxxxxx rules, Stop to receive number immediately. Add prefix code [02] before [3+123456]. Actually send number is [02+3+123456].

Example 2: Index: 2, Rule: 800[0-9]xxxx;;;

Step 1: In [Dial Plan Setting - Advanced] web page, Setup [Index: 2, Rule: 800[0-9]xxxx;;;] (See Figure 1).

Instruction 1: When dial number is [800+1+2345], Meet [Rule] field 800[0-9]xxxx rules, Stop to receive number immediately. The device dials phone number [800+1+2345] automatically.

Instruction 2: When dial number is [800+7+2345], Meet [Rule] field 800[0-9]xxxx rules, Stop to receive number immediately. The device dials phone number [800+7+2345] automatically.

Example 3: Index: 3, Rule: #88;0427121234;3;

Step 1: In [Dial Plan Setting - Advanced] web page, Set up [Index: 3, Rule: #88;0427121234;3;] (See Figure 2).

(Figure 2)

Instruction 1: When dial number is [#88], Meet [Rule] field #88 rules, Stop to receive number immediately. Delete 3 numbers (#88). Then add number [0427121234], Actually sending number is [0427121234].

Example 4: Index: 4, Rule: #87;0427121234;2;

Step 1: In [Dial Plan Setting - Advanced] web page, Setup [Index: 4, Rule: #87;0427121234;2;] (See Figure 2).

Instruction 1: When dialing number is [#87] , meet [Rule] field #87 rules. Stop to receive number immediately. Delete 2 numbers (#8). Then add prefix number [0427121234] before [7], Actually sending number is [0427121234+7].

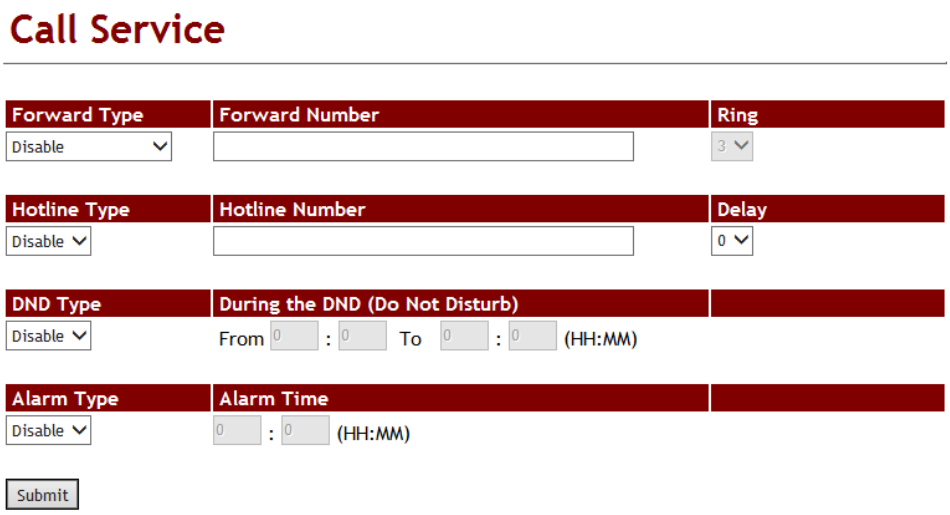
2.5.5. Call Service (Phone Feature)

2.5.5.1. Functions

Provide Forward (Transfer), Hotline, DND (Do Not Disturb) and Alarm.

2.5.5.2. Instruction

Figure 1: LP399 Device



(Figure 1)

Item	Explanation
Forward Type	Default: Disable. Provide option: Disable, All, Busy, No Answer, Busy or No Answer. *Please check the Forward function supported by IP-PBX or SIP Server.
Forward Number	These columns can enter numbers or strings. Maximum length is 63 bytes.
Rings	Default: 3 Rings. When ringing 3 ring cycles and no one answers. It was regarded as no one answers the call. Provide option 2~8 Rings. This function only support No Answer or Busy functions.
Hotline Type	Default: Disable. When Setting Enable, once pick up the phone, it dials the pre-defined phone number automatically.
Hotline Number	Setup Hotline Number, it can be numbers or address. This column can enter numbers or string. Maximum length is 63 bytes. For Example, IP address: 192.168.1.23, or phone number:

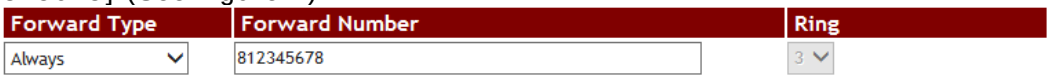
Item	Explanation
	0800024365.
Delay	Default time is 3 seconds. When picking up the phone handset, LP399 dials the Hotline Number automatically after delay predefined seconds was expired. Provide option 0~6 seconds.
DND Type	Default: Disable. DND Setting allows denying all incoming calls (SIP Status: 486 Busy Here) or denies all incoming calls in a certain time period. Provide option: Disable, Always, Period (by Setting time).
During the DND (Do Not Disturb)	Default: From 0:0 (start) To 0:0 (end). These 4 columns can only enter numbers. Maximum length is 2 bytes respectively.
Alarm Type	Default: Disable. When Setting Enable, alarm function will be executed. Duration is 1 minute. Stop the alarm by picking up the handset. Provide option: Disable, Enable.
Alarm Time	Default: 0:0 (hh:mm). These 2 columns can only enter numbers. Maximum length is 2 bytes respectively.
Submit [Button]	Save the settings.

2.5.5.3. Operate Instruction

Example 1: Forward Feature

◆ **All (Unconditional Forward)**

Step 1: In [Call Service Setting] web page, Setup [Forward Type: All, Forward Number: 812345678] (See Figure 1).



(Figure 1)

Step 2: When receiving a new incoming call, LP399 will forward to this number [Forward Number: 812345678] automatically.

◆ **Busy (Busy Forward)**

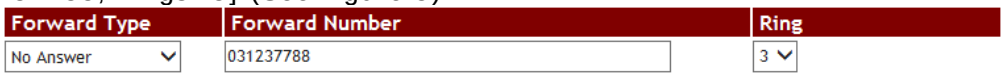
Step 1: In [Call Service Setting] web page, Setup [Forward Type: Busy, Forward Number: 405] (See Figure 2).

(Figure 2)

Step 2: When LP399 is busy, it will forward to [Forward Number: 405] automatically.

◆ **No Answer (No Answer Forward)**

Step 1: In [Call Service Setting] web page, Setup [Forward Type: No Answer, Forward Number: 031237788, Rings: 3] (See Figure 3).



(Figure 3)

Step 2: When LP399 rings 3 times and nobody answer the phone, it will forward to [Forward Number: 031237788].

◆ Busy or No Answer (Busy Forward & No Answer Forward)

Step 1: In [Call Service Setting] web page, Setup [Forward Type: Busy or No Answer, Forward Number: 0800024365, Rings: 3] (See Figure 4).

(Figure 4)

Step 2: When LP399 rings 3 times and if nobody answer the phone or the phone is busy, it will forward to [Forward Number: 0800024365].

Example 2: Hotline Feature

◆ Dial SIP Account

Step 1: In [Call Service Setting] web page, Setup [Hotline Type: Enable, Hot Line number: 82341234, Delay: 3] (See Figure 6).

(Figure 6)

Step 2: When picking up LP399 phone and wait for 3 seconds delay time, it will dial to [Hot Line number: 82341234] automatically.

◆ Dial IP Address

Step 1: In [Call Service Setting] web page, Setup [Hotline Type: Enable, Hot Line number: 192.168.50.4, Delay: 3] (See Figure 7).

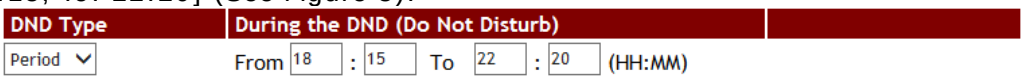
(Figure 7)

Step 2: When picking up LP399 phone and wait for 3 seconds delay time, it will dial to [Hot Line number: 192.168.50.4] automatically.

Example 3: DND Feature

◆ Period

Step 1: In [Call Service Setting] web page, Setup [DND Type: Period, During the DND From: 18:15, To: 22:20] (See Figure 8).



(Figure 8)

Step 2: When receiving a new call during DND time period, the caller will hear “busy tone”.

◆ Always

Step 1: In [Call Service Setting] web page, Setup [DND Type: Always] (See Figure 9).

(Figure 9)

Step 2: When receiving a new call, the caller will hear “busy tone”.

Example 4: Alarm Feature

Step 1: In [Call Service Setting] web page, Setup [Alarm Type: Enable, Alarm Time: 21:00] (See Figure 10).

(Figure 10)

Step 2: At 21:00 everyday, the alarm will start to work and last for 1 minute. After 1 minute, the alarm will stop. During ringing and pick up the phone, the alarm will stop automatically.

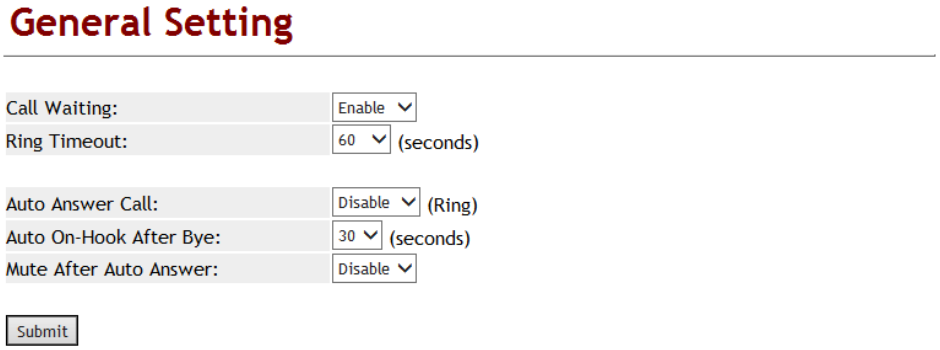
2.5.6. General (Normal Setting)

2.5.6.1. Functions

General Provide Caller ID, Call Waiting, Auto Answer and etc.

2.5.6.2. Instruction

Figure 1: LP399 Device



(Figure 1)

Item	Explanation
Call Waiting	Default: Enable. When Setting up Call Waiting Enable and an incoming call arrives, you will hear a waiting tone. If you want to answer this waiting call, you need to press the key [Hold] to hold existing call and answer incoming call. Provide options: Disable, Enable.
Ring Timeout	Default: 60 seconds. LP399 Phone will send a stop message to the caller when the Ring Timeout was expired. Provide options: 20, 40, 60, 80, 120, 180 and 240.
Auto Anwser Call	Default: Disable. If you Enable this function and when receiving an incoming call, LP399 phone will answer the call automatically and enable Loud Speaker Phone feature. Provide options: Disable, No Ring (auto answer), or 1,2,3,4,5 rings.
Auto On-Hook After Bye	Default: 30 (seconds). LP399 phone will auto On-hook (drop this call) when it received a bye message after configured time was expired. Provide options: 0, 5, 10, 20, 30.
Mute After Auto Answer	Default: Disable. If you Enable this function, LP399 phone will activate mute feature after it answer a call automatically. Provide options: Disable, Enable.
Submit [Button]	Save the settings.

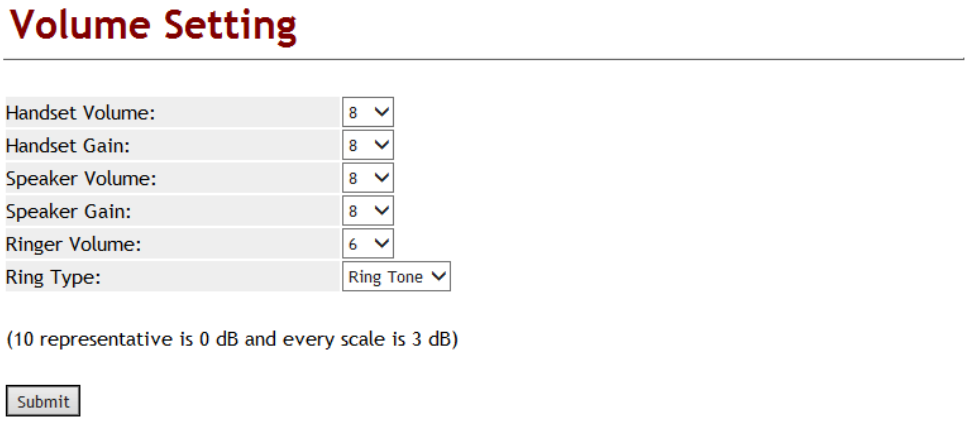
2.5.7. Volume

2.5.7.1. Functions

Volume can setup received volume and transmitted gain and ring type of this LP399 IP Phone.

2.5.7.2. Instruction

Figure 1: LP399 Device



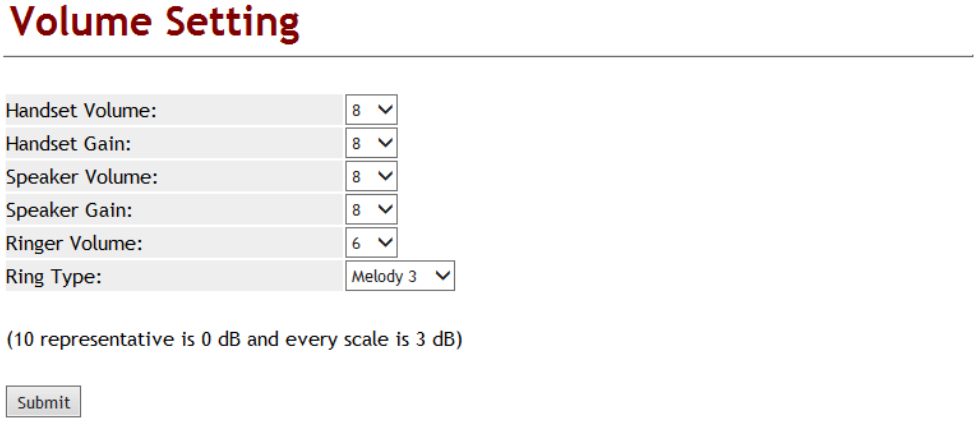
(Figure 1)

Item	Explanation
Handset Volume	Default: 10. Setup your handset receiving volume. Provide options: 0~14.
Handset Gain	Default: 10. Setup the handset microphone gain. Provide options: 0~14.
Speaker Volume	Default: 10. Setup Spearker volume at Loud Speaker phone mode. Provide options: 0~14.
Speaker Gain	Default: 10. Setup the microphone gain at Loud Speaker phone mode. Provide options: 0~14.
Ringer Volume	Default: 6. Setup incoming Ring volume. Provide options: 0~10.
Ring Type	Default: Ring Tone. Provide options: Ring Tone, Melody 1, Melody 2, Melody 3. Ring Tone: Refer to Tones setting argument [Ring Tone].
Submit [Button]	Save the settings.

2.5.7.3. Operate Instruction

Example 1: Ring Type

Step 1: In [Genereal Setting] web page, Set up [Ringer Type: Melody 3] (See Figure 1).



(Figure 1)

Step 2: When receiving an incoming call, you will listen a different ring.

2.6. Network

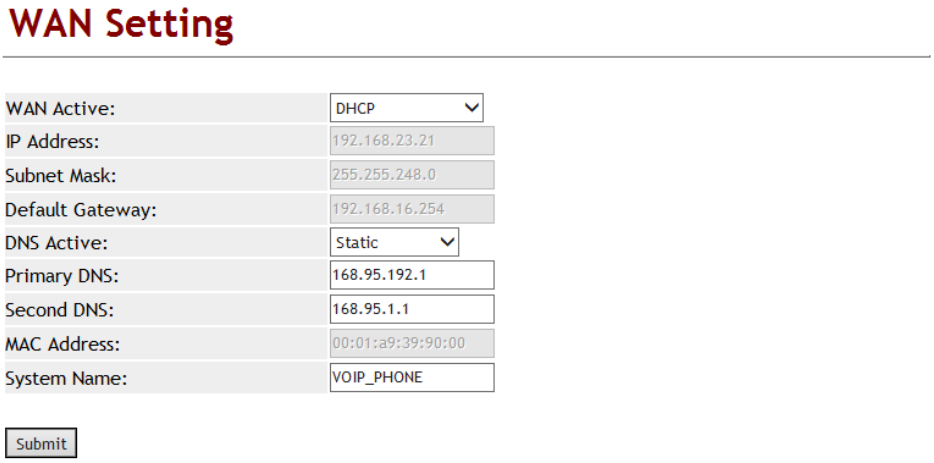
Provide functions of [WAN, DDNS, VLAN, VPN, NTP].

2.6.1 WAN

2.6.1.1. Functions

WAN provides function to set up WAN port network IP address with fixed IP, DHCP Client and PPPoE.

2.6.1.2. Instruction



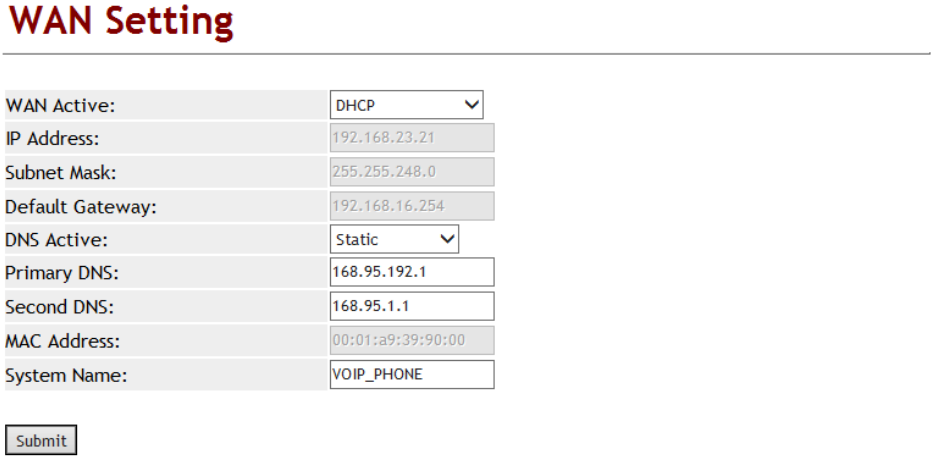
Item	Explanation
WAN Active	Default: DHCP Client. Setup the network connecting type including fixed IP, DHCP Client and PPPoE. Fixed IP: Enter a static IP address. DHCP Client: Get IP address from DHCP server. PPPoE: Uses PPPoE to connect IP network. Provide options: Fixed IP, DHCP Client, and PPPoE.
IP Address	Show the current IP address, enter type is xxx.xxx.xxx.xxx of 15 bytes. *If you want to setup the IP address, please Setup [TYPE] to [Fixed IP] first. Then you can enter IP address.
Subnet Mask	Shows the current Subnet Mask IP Address, the enter type is xxx.xxx.xxx.xxx of 15 bytes.
Default Gateway	Shows current Default Gateway IP Address, the enter type is xxx.xxx.xxx.xxx of 15 bytes.
DNS Active	Default: Auto. Fixed: Setup DNS Server address. Auto: Get DNS Server address from DHCP Server and this option only supports DHCP Client and PPPoE. Provide options: Fixed, Auto.
Primary DNS	Default: 168.95.192.1. The enter type is xxx.xxx.xxx.xxx of 15 bytes.
Secondsond DNS	Default: 168.95.1.1. The enter type is xxx.xxx.xxx.xxx of 15 bytes.
MAC Address	Shows the MAC ID address.
System Name	Default: VOIP_Phone.

Item	Explanation
	This column can enter numbers and strings; maximum length is 15 bytes.
PPPoE User	This column can enter numbers and strings; maximum length is 32 bytes.
PPPoE Password	This column can enter numbers and strings; maximum length is 32 bytes.
PPPoE Service Name	This column can enter numbers and strings; maximum length is 32 bytes. *The information of this column is provided by ISP, if you don't known what is the data, do not Setup it.
PPPoE AC Name	This column can enter numbers and strings; maximum length is 32 bytes. *The data of this column is provided by ISP, if you don't known what is the data, do not setup it.
Submit [Button]	Save the settings.

2.6.1.3. Operate Instruction

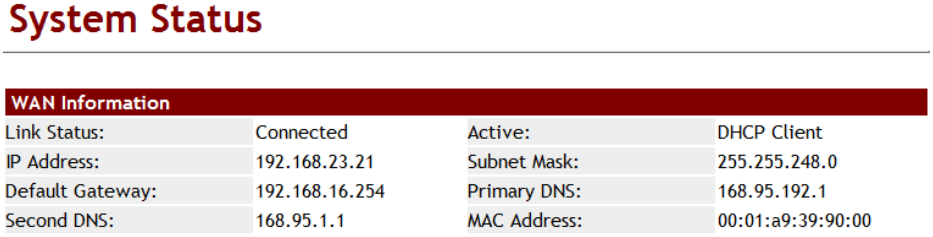
Example 1: Check Host Name

Step 1: In [WAN Setting] web page, Setup [WAN Active: DHCP, System Name: VOIP_PHONE] (See Figure 1).



(Figure 1)

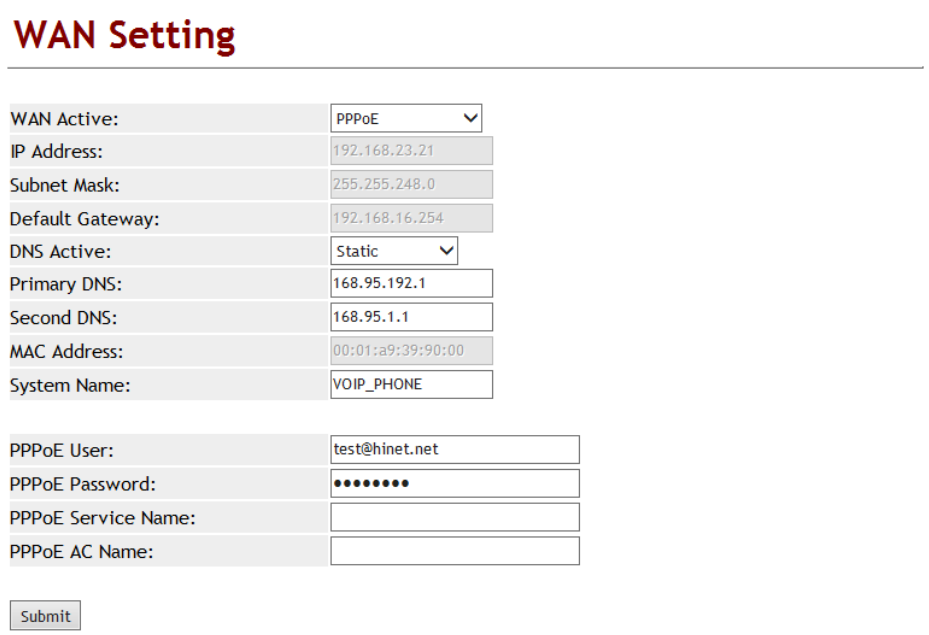
Step 2: In [System Status] web page, User can view [WAN] port network status (See Figure 2).



(Figure 2)

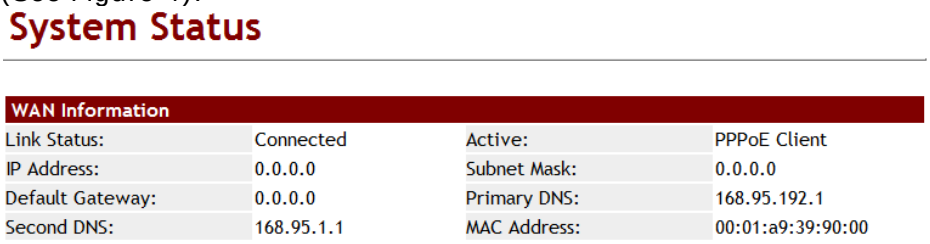
Example 2: Check PPPoE Service Name & AC Name

Step 1: In [WAN Setting] web page, Setup [WAN Active: PPPoE, PPPoE User: test@hinet.net, PPPoE Password: test] (See Figure 3).



(Figure 3)

Step 2: In [System Status] web page, User can view [WAN] port network status [Type: PPPoE Client] (See Figure 4).



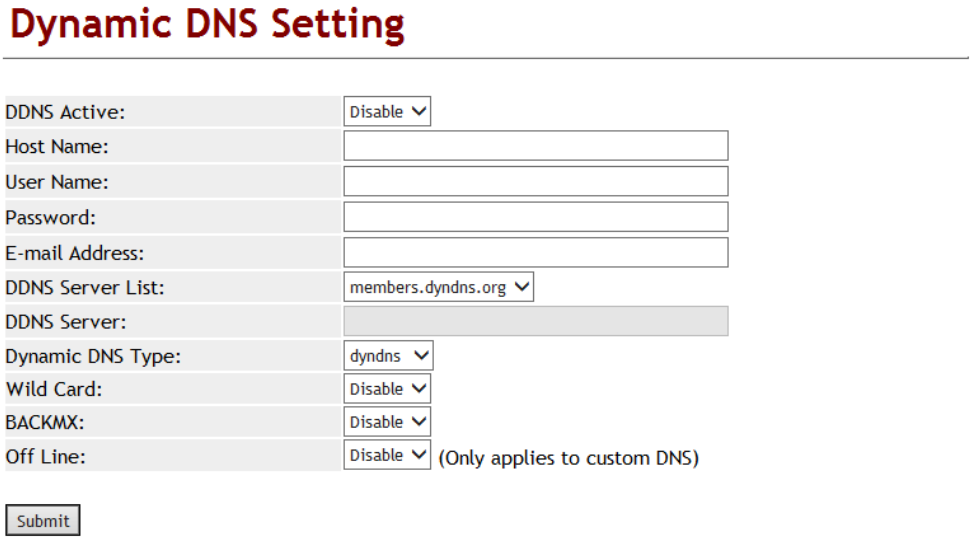
(Figure 4)

2.6.2. DDNS (Dynamic DNS Settings)

2.6.2.1. Function

DDNS Provide functions to Setup DDNS client.

2.6.2.2. Instruction



Item	Explanation
DDNS Active	Default: Disable.

Item	Explanation
	Provide options: Disable, Enable.
Host Name	Host name can be IP Address or Domain Name. This column can enter numbers and strings; maximum length is 63 bytes.
User Name	Enter user's name for registering DDNS Server. This column can enter numbers and strings; maximum length is 63 bytes.
Password	Enter user's password to register DDNS Server. This column can enter numbers and strings; maximum length is 63 bytes.
E-mail Address	Enter E-mail address. This column can enter numbers and strings; maximum length is 63 bytes.
DDNS Server List	Default: members.dyndns.org. Display DDNS server's name list information. Provide options: Custom (user enter), members.dyndns.rog, www.dtdns.com.
DDNS Server	DDNS Server can be IP Address or Domain Name. This column can be numbers and strings; maximum length is 63 bytes.
Dynamic DNS Type	Default: dyndns. Provide options: dyndns, statdns and Custom. If you choose Custom, you can change the type information.*
Wild Card	Default: Enable. Provide: Disable, Enable, nochg.*
BACKMX	Default: Enable. Provide: Disable, Enable.*
Off Line	Default: Enable. Provide: Disable, Enable.*
Submit [Button]	Save the Settings.

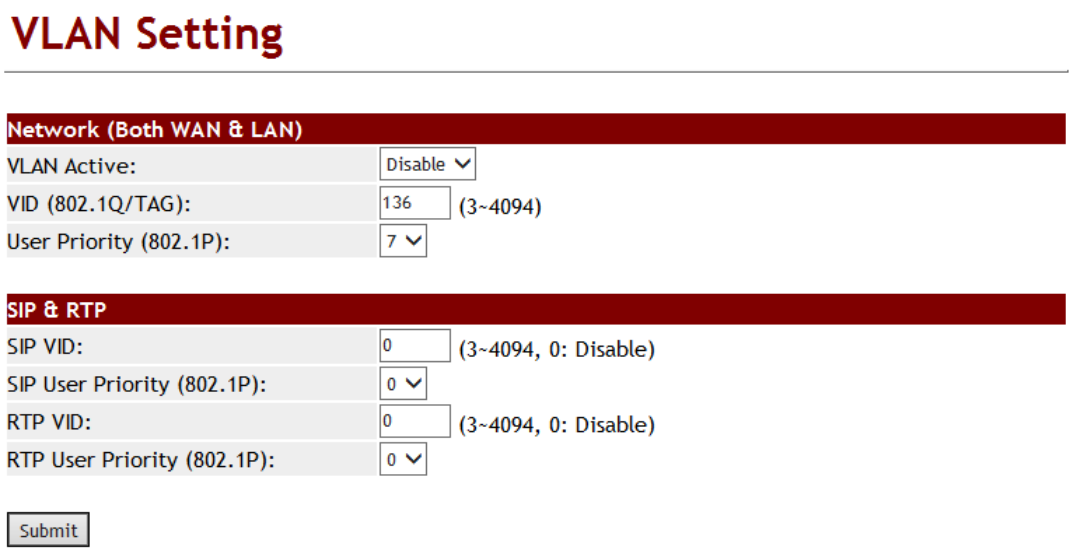
*: 1.Not all DNS providers can support this function. If you want to use this function, please contact with your provider.
2.Query DNS data did not update in real time because of the DNS server updated cycle time. Please make sure the DNS server updated correct time or login DNS server to check if the IP address is correct or not.

2.6.3. VLAN (VLAN Environment Settings)

2.6.3.1. Functions

VLAN Provides functions to Setup VLAN including Network, SIP and RTP. These functions must work with a VLAN Router.

2.6.3.2. Instruction



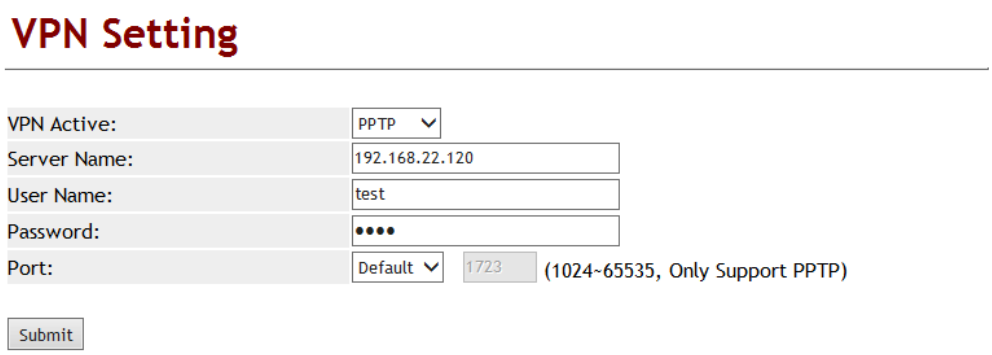
Item	Explanation
Network (Both WAN & LAN)	Set up VLAN functions.
VLAN Active	Default: Disable; When Enabling this function, receiving VALN Packets function will be started. Provide: Disable, Enable.
VID (802.1Q/ TAG)	Default: 136; Provide Virtual LAN ID (VLAN or VID) for VLAN Server. This column can only be numbers; maximum length is 4 bytes with the range 3~4094.
User Priority (802.1P)	Default: 0; This column can only be number; maximum length is 1 bytes with the range 0~7.
SIP & RTP	Setup the VLAN function of SIP & RTP
SIP VID	Default: 0; If you Enable this function, SIP ethereal packages will contain VLAN ID instead of Enabling VLAN Packets. This column can only be numbers; maximum length is 4 bytes with the range 3~4094, and 0 is Disable.
SIP User Priority (802.1P)	Default: 0. Provide options: 0~7.
RTP VID	Default: 0; If you Enable this function, RTP ethereal packages will contain VLAN ID instead of Enabling VLAN Packets. This column can only enter numbers; maximum length is 4 bytes with the range 3~4094, and 0 is Disable.
RTP User Priority (802.1P)	Default: 0. Provide options: 0~7.
Submit [Button]	Save the Settings.

2.6.4. VPN (PPTP/L2TP Link Type)

2.6.4.1. Functions

VPN Provide functions to Setup PPTP/L2TP. Note: After you have enabled the VPN functions, you could login in LP399 to configure via LAN port.

2.6.4.2. Instruction



Item	Explanation
VPN Active	Default: Disable; Setup the network connecting type of PTP/L2TP. Provide options: Disable, PPTP, L2TP.
Server Name	Enter connecting VPN Server address. This column can enter IP or Domain Name with the format at xxx.xxx.xxx.xxx; maximum length is 63 bytes.
User Name	This is user's name. This column can be numbers of strings; maximum length is 63 bytes.
Password	This is user's password. This column can be numbers of strings; maximum length is 63 bytes.
Port	Default: Disable, Port: 1723. Setup the Port Number of PPTP. When you select Custom, you can enter the Port Number of PPTP by yourself. This column can only enter numbers; maximum length is 5 bytes with the range 1024~65535. Provide options: Default, Custom.
Submit [Button]	Save the Settings.

2.6.4.3. Special Instruction

PPTP or L2TP don't support CCP compression and IPSEC encryption.

Description: If it is not successfully to dial-up, please disable [CCP] function because LP399 don't support [CCP] function. If you are using Ubuntu Linux platform, Please modify the following instructions.

Modify pptpd-options

Use vim edit pptpd.options, Command :

```
sudo vim /etc/ppp/pptpd.options
```

pptpd.options file contents :

```
# Network and Routing

# If pppd is acting as a server for Microsoft Windows clients, this
# option allows pppd to supply one or two DNS (Domain Name Server)
# addresses to the clients.  The first instance of this option
# specifies the primary DNS address; the secondsond instance (if given)
# specifies the secondsondary DNS address.
# Attention! This information may not be taken into account by a Windows
# client. See KB311218 in Microsoft's knowledge base for more information.
ms-dns 168.95.192.1
ms-dns 168.95.1.1
noccp
```

- About the middle of the file content, Please find a parameter #ms-dns, delete #. Then assign VPN users DNS Server address. For example is Chunghwa telecom DNS, ms-dns 168.95.192.1.

- The first #ms-dns, there is another #ms-dns in next line, If you want to use one DNS only, you don't care this line. Instead, please remove the #, Fill secondsond DNS Server address. For example is Chunghwa telecom DNS, ms-dns 168.95.1.1.
- And then add this command **noccp** on the next line, Because CPU of LP399 do not support VPN IPSEC file compression. If the file does not add this line, the deivce can not get VPN IP address.

Example 1: VPN Disable IPSEC Feature

Edit xl2tpd.conf file

Use vim edit xl2tpd.conf, Command :

```
sudo vim /etc/xl2tpd.conf
```

```
[global]
ipseconds saref = no

[lns default]
ip range = 192.168.50.136-192.168.50.140
local ip = 192.168.50.120
require chap = yes
require authentication = yes
pppoptfile = /etc/ppp/options.xl2tpd
ppp debug = yes
```

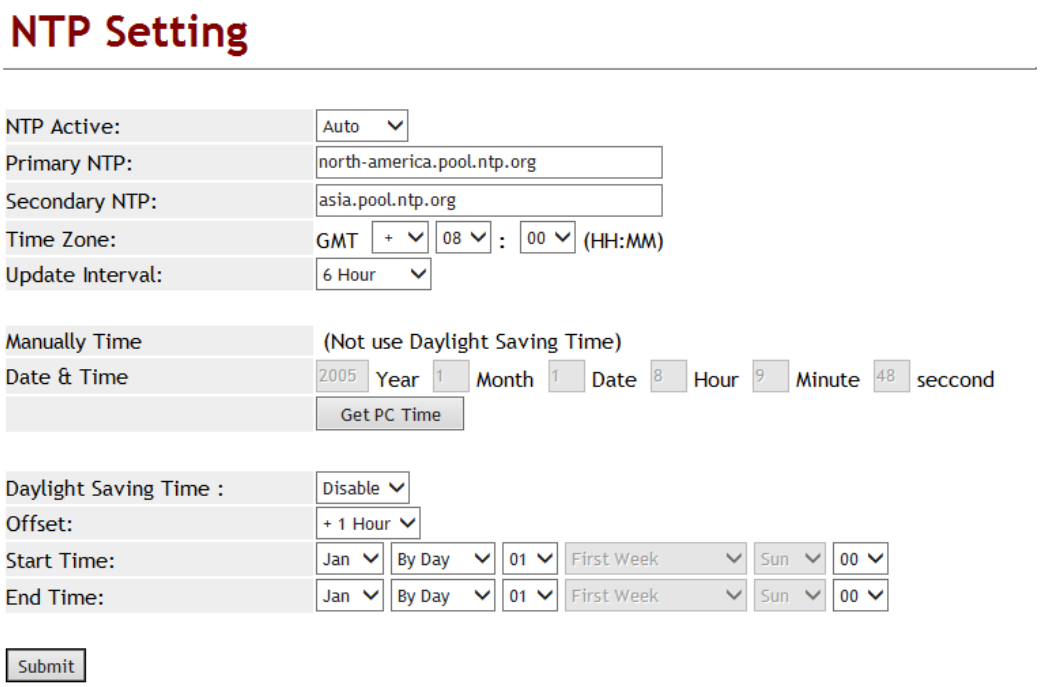
- Do not support IPSEC. Please enter this command [**ipsec saref = no]** to disable this function. Because CPU do not support VPN IPSEC encryption function. If the file does not add this line, LP399 IP Phone can not get VPN IP address.

2.6.5. NTP (Time Environment)

2.6.5.1. Functions

NTP Provide functions to Setup Time and Daylight Saving.

2.6.5.2. Instruction


NTP Setting
NTP Active: Auto
Primary NTP: north-america.pool.ntp.org
Secondary NTP: asia.pool.ntp.org
Time Zone: GMT + 08 : 00 (HH:MM)
Update Interval: 6 Hour
Manually Time (Not use Daylight Saving Time)
Date & Time 2005 Year 1 Month 1 Date 8 Hour 9 Minute 48 seccond
Get PC Time
Daylight Saving Time : Disable
Offset: + 1 Hour
Start Time: Jan By Day 01 First Week Sun 00
End Time: Jan By Day 01 First Week Sun 00
Submit

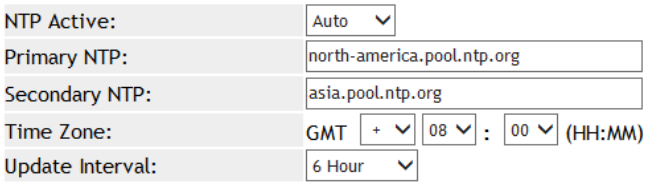
Item	Explanation
NTP Active	Default: Enable; When Enable this function, the SNTP is on.

Item	Explanation
	Provide options: Disable, Enable.
Primary NTP	Default: north-america.pool.ntp.org. This column can enter IP or Domain Name with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes.
Secondsondary NTP	Default: asia.pool.ntp.org. This column can enter IP or Domain Name with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes.
Time Zone	Default: GMT + 08:00 (hh:mm) and the format is (+/-, hh:mm). Provide options: +/-, 0~13(hh), 00, 15, 30, 45(mm).
Update Interval	Default: 6; Sync. Time will be checked with NTP Server according to the interval you have setup. Provide options: 1 min., 5 min., 30 min., 1 hour, 3 hour, 6 hour, 12 hour, 24 hour.
Manually Time	When enable this time function manually, Daylight Saving Time function will be disabled. Note: If LP399 electric power was removed, this time will be lost.
Date & Time	Year; Setup the Year; Only use number, Data Settings secondstion is 2011~2022, maximum length is 4 bytes. Month; Setup the Month; Only use number, Data Settings secondstion is 1~12, maximum length is 2 bytes. Date; Setup Date; Only use number, Data Settings secondstion is 1~31, maximum length is 2 bytes. Hour; Setup Hour; Only use number, Data Settings secondstion is 0~23, maximum length is 2 bytes. Minute; Setup Minute; Only use number, Data Settings secondstion is 0~59, maximum length is 2 bytes. Secondsond; Setup Secondsond; Only use number, Data Settings secondstion is 0~59, maximum length is 2 bytes.
Get PC Time [Button]	Get local personal computer date and time information.
Daylight Saving Time	Default: Disable. When Enable this function, the Daylight Saving is on. Provide options: Disable, Enable.
OffSet up	Default: +2 Hour. Set up the Daylight Saving Time difference. Provide options: -2 hour, -1 hour, +1 hour, +2 hour.
Start Time	Setup Daylight Saving Time. You can select the start date by day or week. Setup beginning month: Default Setting is January. Here offers options from January to December. Day of Month：Default Setting is 01. Here Provide options from 1th to 31th. Week of Month: Selects the effective week. Here Provide options for Last Week, Last Secondsond Week, Week1, Week2 and Week3。 Day：Provide options: Sun, Mon, Tue, Wed, Thu, Fri, Sat. Start Time：00~23.
End Time	Stop Daylight Saving Time Setting. You can select the end date by day or week. Setup ending month: Default Setting is January. Here offer options froms Jan to Dec. Day of Month：Default Setting is 01. Here Provide options from 1th to 31th. Week of Month: Selects the effective week. Here Provide options for Last Week, Last Secondsond Week, Week1, Week2 and Week3。 Day：Provide options: Sun, Mon, Tue, Wed, Thu, Fri, Sat. Start Time：00~23.
Submit [Button]	Save the Settings.

2.6.5.3 Operate Instruction

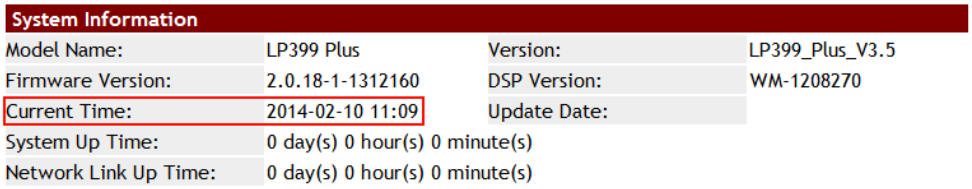
Example 1: NTP Setting

Step 1: In [NTP Setting] web page, Setup [NTP Active: Auto, Primary NTP: north-america.pool.ntp.org, Secondsondary NTP: asia.pool.ntp.org, Time Zone: GMT+ 08:00, Update Interval: 6 Hour] (See Figure 1).



(Figure 1)

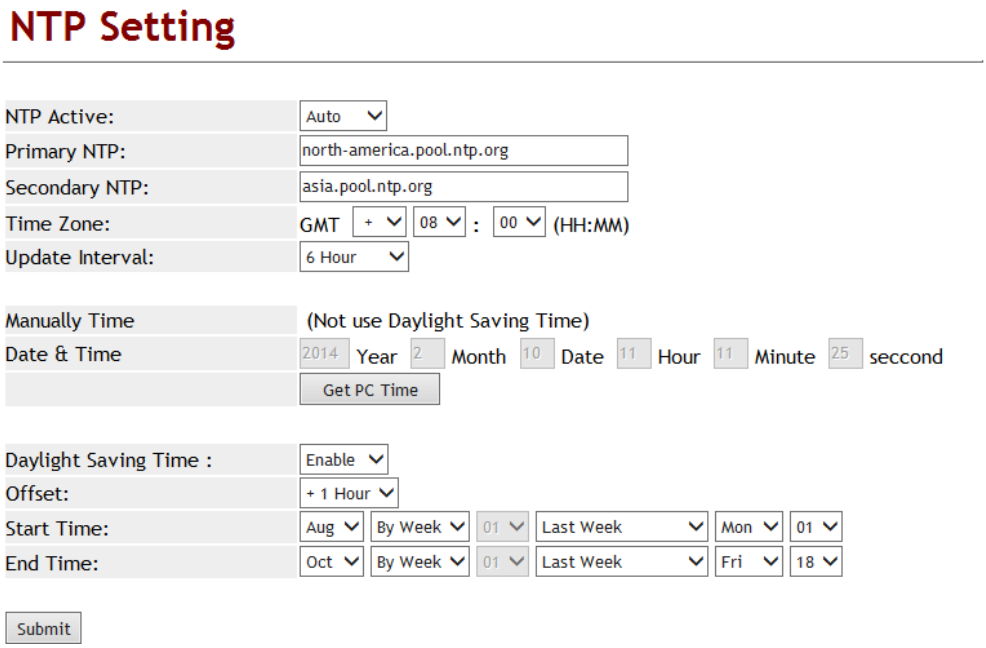
Step 2: In [System Status] web page, View the [Current Time] field, The field show time information now (See Figure 2).



(Figure 2)

Example 2: DST Setting (Daylight Saving Time)

Step 1: In [NTP Setting] web page, Setup [NTP Active: Auto, Primary NTP: north-america.pool.ntp.org, Secondsondary NTP: asia.pool.ntp.org, Time Zone: GMT+ 08:00, Update Interval: 6 Hour, Daylight Saving Time: Enable, OffSet up: +1 Hour, Start Time: Aug, By Week, Last Week, Mon, 01, End Time: Oct, By Week, Last Week, Fri, 18] (See Figure 3).



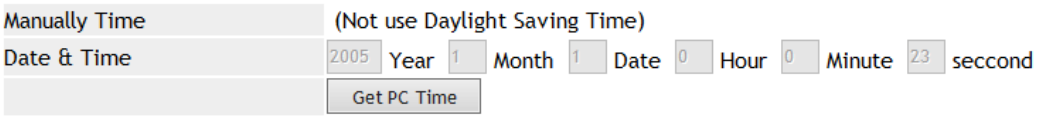
(Figure 3)

Step 2: In [System Status] web page, View the [Current Time] field, The field show [Daylight Saving Time] time information.

Example 3: Manually Setup NTP

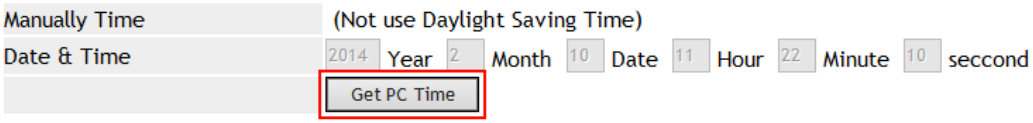
Step 1: In [NTP Setting] web page, Setup [NTP Active: Manual] , Press [Get PC Time] button to get personal computer's date and time (For example : Date & Time: 2005 Year, 1 Month,

1 Date, 0 Hour, 0 Min, 23 secondsond) (See Figure4).



(Figure 4)

Step 2: In [System Status] web page, View the [Current Time] field, The field show [Manually Time] time information (See Figure 5).



(Figure 5)

2.7. NAT (NAT Environment)

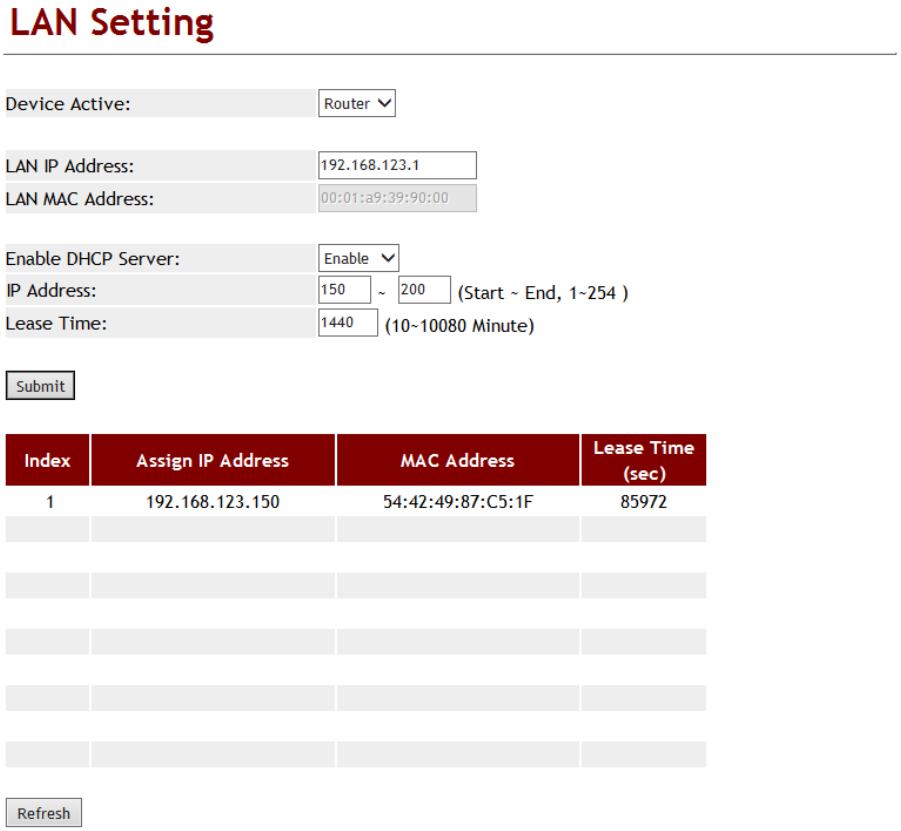
Provide function of [LAN, DMZ & MAC Clone, Virtual Server].

2.7.1. LAN (LAN Network Setting)

2.7.1.1. Functions

LAN Provides functions including DHCP Server.

2.7.1.2. Instruction



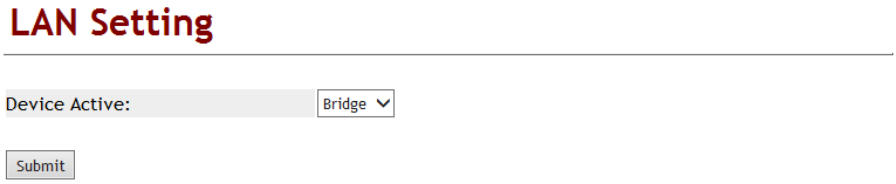
Item	Explanation
Device Active	Default: NAT. Setup the routing function of LAN Port. Provide options: Bridge, NAT. Bridge: When you Setup Bridge, [WAN & LAN] Port are all in the same IP domain, just like in the same network switch. NAT: When you Setup NAT, [WAN & LAN] Port are in the different IP domain. LAN Port work as DHCP server when you Enable DHCP Server Active function.
LAN IP Address	**Default: 192.168.123.1.** The type is xxx.xxx.xxx.xxx of 15 bytes.
LAN MAC Address	Show LAN MAD ID address.
Enable DHCP Server	Default: Enable; When you Disable this function, LAN Port will not be a DHCP Server. Provide options: Enable, Disable.
IP Address	Default: 150~200; Setup the IP address range of DHCP Server. This column can only be numbers; maximum length is 3 bytes with the range of 1~254.
Lease Time	Default is 1440 (min), IP address rented deadline. Only use number, Data setting range is 10~17820, maximum length is 5 bytes.
Submit [Button]	Save the Settings.
Index	Shows the serial number.

Assign IP Address	LP399 DHCP server appoint IP address.
MAC Address	Connect LP399 LAN port device's MAC address.
Lease Time(sec)	LAN port device connection time.
Refresh [Button]	Reload DHCP device status.

2.7.1.3. Operate Instruction

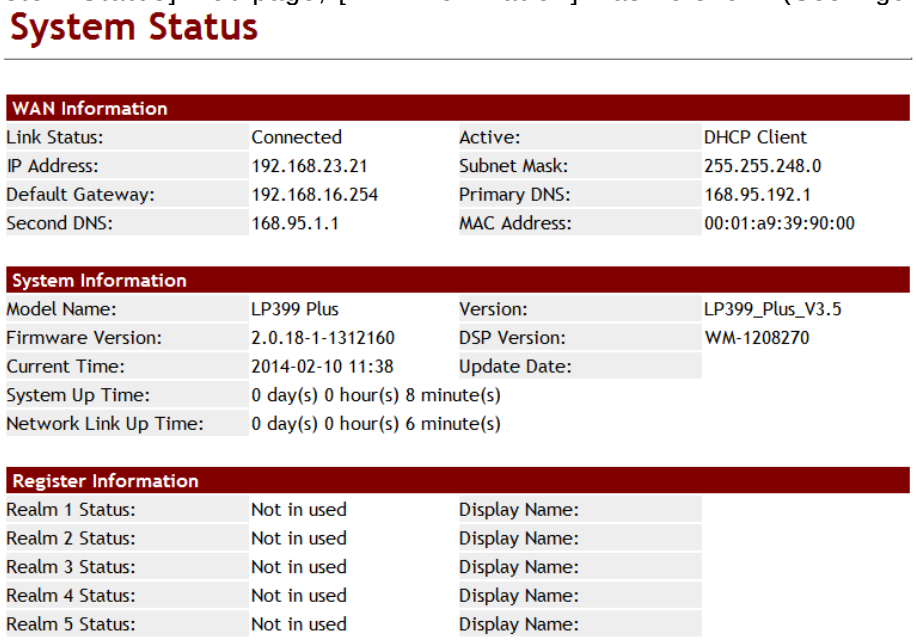
Example 1: LAN Mode: Bridge

Step 1: In [LAN Setting] web page, Setup [Device Active: Bridge] (See Figure 3).



(Figure 3)

Step 2: In [System Status] web page, [LAN Inofrmation] was no show. (See Figure 4).



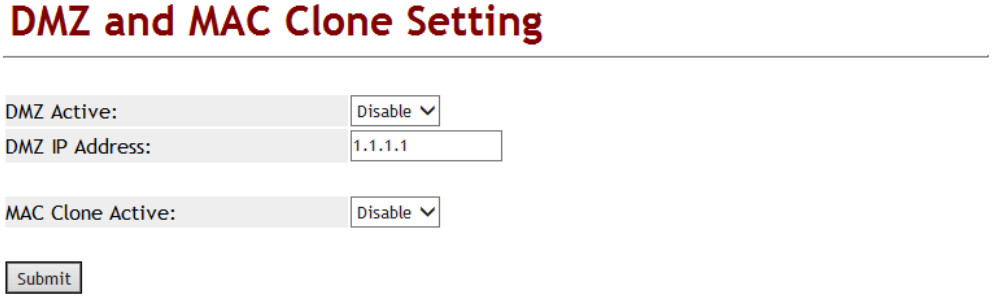
(Figure 4)

2.7.2. DMZ & MAC Clone (DMZ & MAC Setting)

2.7.2.1. Functions

DMZ & MAC Clone Provide functions to Setup DMZ and MAC Clone.

2.7.2.2. Instruction



Item	Explanation

DMZ Active	Defualt: Disable; When you Enable this function, all the incoming packages will transfer to the assigned IP address. Provide options: Disable, Enable.
DMZ IP Address	Default: 0.0.0.0. The assigned IP address type is xxx.xxx.xxx.xxx of maximum 15 bytes.
MAC Clone Active	Default: Disable; When you Enable this function, LP399 will provide MAC ID Clone of PC through LAN Port. Provide options: Disable, Enable. Note: 1. MAC Clone function: Must use “Device Active” to Setup “Router” mode, then enable to get IP address automatically. 2. Connect PC to LAN port of LP399, After PC get the IP address and use LAN port login web page. Be able to Setup this function to configure.
Submit [Button]	Save the Settings.

2.7.2.3. Special Considerations

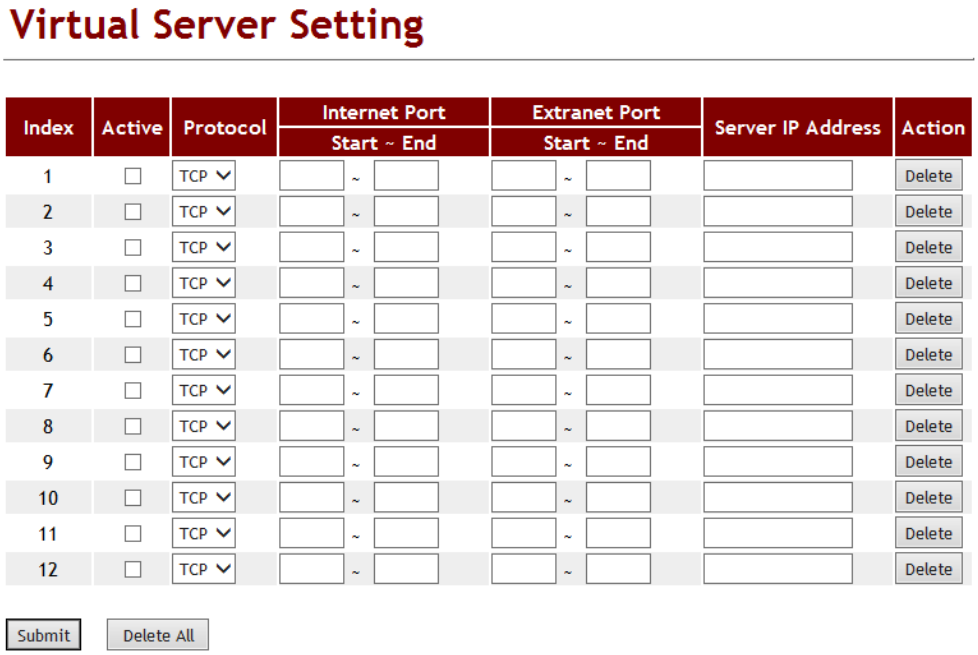
If MAC Clone want to retrieve LP399 originally MAC address, Please reset to default Setting (Restore Default Setting).

2.7.3. Virtual Server

2.7.3.1. Functions

Virtual Server Provides 12 sets of Virtual Server information.

2.7.3.2. Instruction



Item	Explanation
Index	Show the number.
Active	Default: Not use. If you select it, the setup will be started.
Protocol	Default: TCP. Select the Protocol: TCP or UDP.
Internet Port	Show the address of Internet Port. Setup the Internet Port address of Start and End.

	This column can only enter numbers; maximum length is 5 bytes with the range of 1~65533. If you want to Setup fixed Port, you should enter the same number for the two columns. If you want to Set up a period of Ports, the left column is Start Port and the right column is End Port.
Extranet Port	Show the address of Extranet Port. Setup the Extranet Port address of Start and End. This column can only enter numbers; maximum length is 5 bytes with the range of 1~65533. If you want to Setup fixed Port, you should enter the same number for the two columns. If you want to Setup a range of Ports, the left column is Start Port and the right column is End Port.
Server IP Address	Setup the Internal Server IP address. The type is xxx.xxx.xxx.xxx of 15 bytes.
Action	Provide [Delete] button to erase the data.
Submit [Button]	Save the Settings.
Delete All [Button]	Reset all data.

Note: 1. Internet & Extranet Port parameter, Please remember to avoid the local LP399 default port, Example: 5060, 9999, 20000, other ports can refer to documents.

2.7.3.3. Operate Instruction

Step 1: In [Vitrual Server Setting] web page, Setup [Index: 1, Active :select, Protocol: TCP, Internet Port: 80~80, Extranet Port: 8080~8080, Server IP Address: 192.168.123.150; Index: 2, Active:select, Protocol: TCP, Internet Port: 600~600, Extranet Port: 600~600, Server IP Address: 192.168.123.15] (See Figure 1).

Index	Active	Protocol	Internet Port Start ~ End		Extranet Port Start ~ End		Server IP Address	Action
1	☑	TCP	80	80	8080	8080	192.168.123.150	Delete
2	☑	TCP	600	600	600	600	192.168.123.15	Delete

(Figure 1)

Step 2: Use other personal computer to Setup IP 192.168.123.150, Then connect LP399's LAN port, Start personal computer Web Server function.

Step 3: Link to [http://192.168.123.150:8080], Show [Web Function Testing] web page.

2.8. SIP Setting (Register Environment)

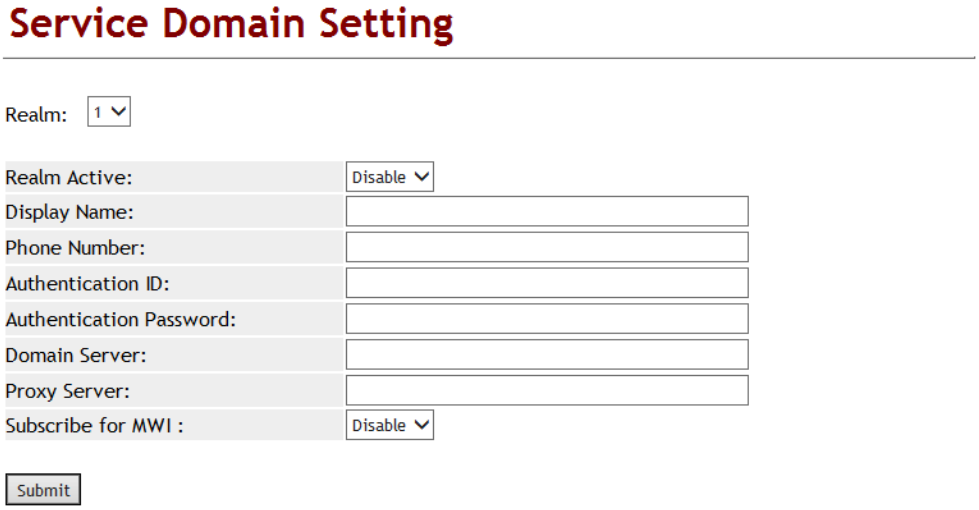
Provide functions of [Service, Codec, Advanced, STUN].

2.8.1. Service (SIP Register Setting)

2.8.1.1. Functions

Provide 5 SIP register accounts to register 5 different SIP Server or IP-PBX.

2.8.1.2. Instruction



Item	Explanation
Realm	Default: Realm 1. Provide options: 1~5. Realm is, in other words, SIP Server or IP-PBX Server. There 5 realm can be the same one.
Realm Active	Default: Disable; When you Enable this function, LP399 will start to register the SIP Register Server or IP-PBX server. Provide options: Disable, Enable.
Display Name	Display name will be shown on LCD of your LP399. This column can enter numbers and strings (support: 0~9, a~z, @, _, -, *, #, ., +, :); maximum length is 31 bytes.
Phone Number	Setup assigned Phone Number from SIP Register Server or IP-PBX server. This column can be numbers and strings (support: 0~9, a~z, @, _, -, *, #, ., +, :); maximum length is 31 bytes.
Authentication ID	Setup the SIP Register ID. This column can be numbers and strings(support: 0~9, a~z, @, _, -, *, #, ., +, :); maximum length is 47 bytes.
Authentication Password	Setup SIP Registration Password. This column can be numbers and strings; maximum length is 31 bytes.
Domain Server	Setup Domain Server. This column can enter IP or Domain Name with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes. If the Domain Server has Port Number, please add it at the end of Domain Name, for instance: nat.voiptalk.org:5065.
Proxy Server	Set up Proxy Server or IP-PBX Server. This column can enter IP or Domain Name with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes. If the Domain Server has Port Number, please add it at the end of Domain Name, ex: nat.voiptalk.org:5065.
Subscribe for MWI	Default: Disable. When Enable this function, system will send [Subscribe of MVI]

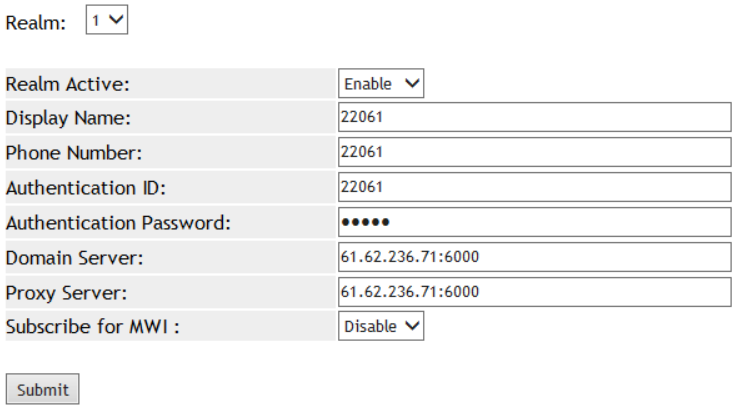
Item	Explanation
	message. Please confirm this function supported by your SIP Register Server or IP-PBX server.
Submit [Button]	Save the Settings.

2.8.1.3. Operate Instruction

Example 1: Register at port other than 5060

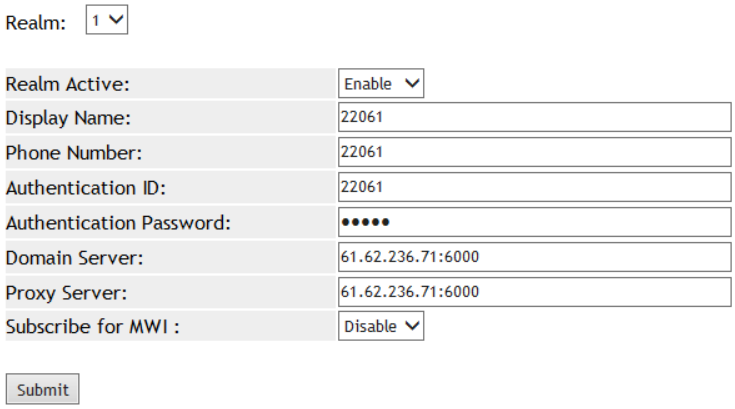
Step 1: In [Service Domain Setting] web page, Set up [Realm Active: Enable, Display Name: 22061, Phoner Number: 22061, Authentication ID: 22061, Authentication Password: test, Domain Server: 61.62.236.71:6000, Proxy Server: 61.62.236.71:6000, Subscribe for MWI: Disable] (See Figure 1).

Since port 5060 is widely used in VoIP SIP port, hacker is easily to detect your device is an VoIP device (via port 5060) and invade your device to make expensive call. We strongly suggest not to use port 5060. Use another port to avoid this issue happening. In this example, We use SIP port 6000 instead. However, your registration SIP Server or IP-PBX Server should be able to acceport SIP port other than 5060.



(Figure 1)

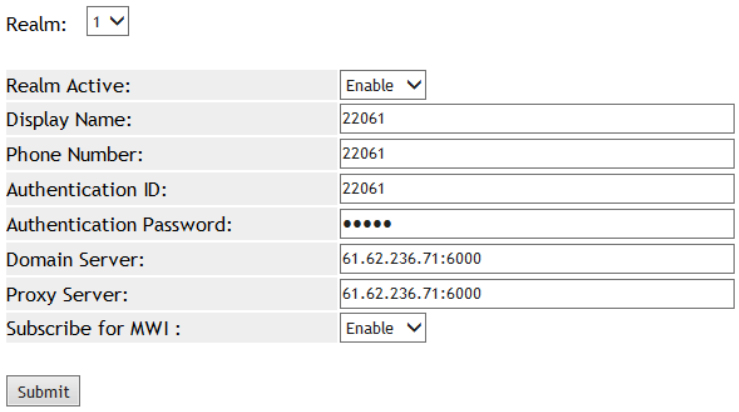
Step 2: In [Service Domain Setting] web page (See Figure 2), the register status of that account is [System Status].



(Figure 2)

Example 2: Enalbe Subscribe For MWI

Step 1: In [Service Domain Setting] web page, Setup [Realm Active: Enable, Display Name: 22061, Phoner Number: 22061, Authentication ID: 22061, Authentication Password: test, Domain Server: 61.62.236.71:6000, Proxy Server: 61.62.236.71:6000, Subscribe for MWI: Enable] (See Figure 3).



(Figure 3)

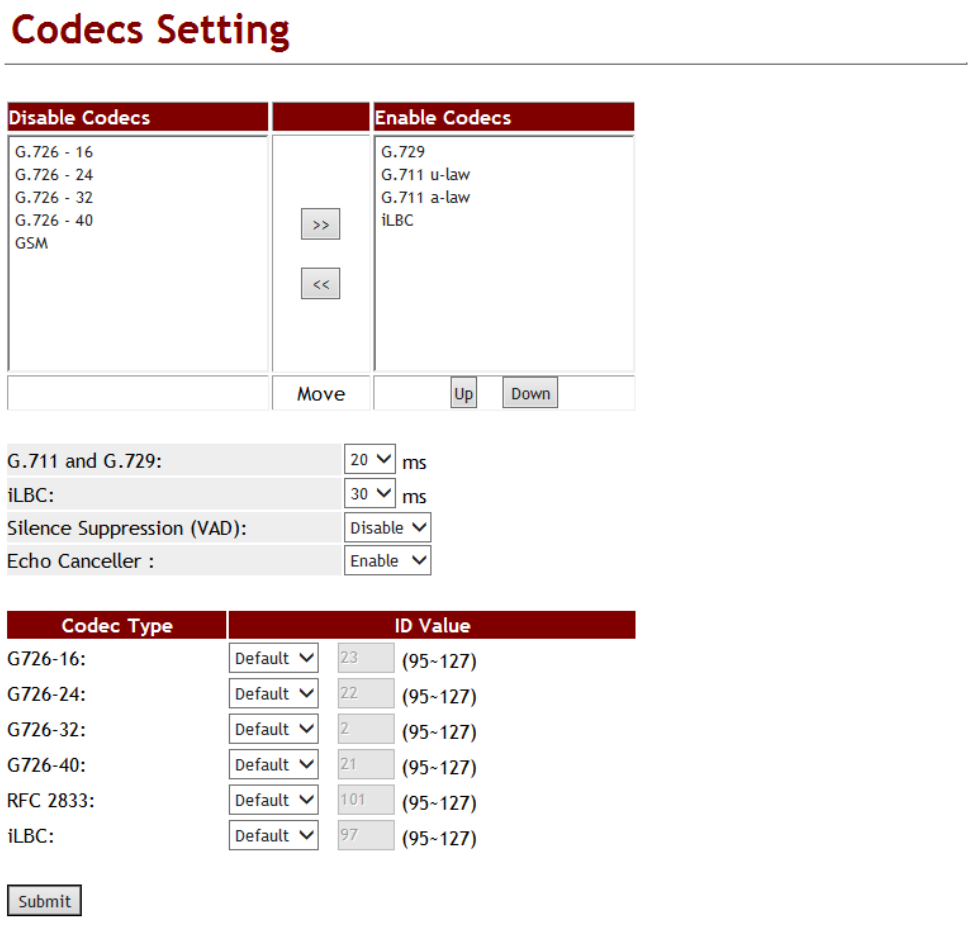
2.8.2. Codec (Voice Format)

2.8.2.1. Functions

Codec Provide function to Setup priority of codec when call was established between two parties, RTP Package Length, and Codec ID Value.

2.8.2.2. Instruction

Figure 1: Codecs Setting



(Figure 1)

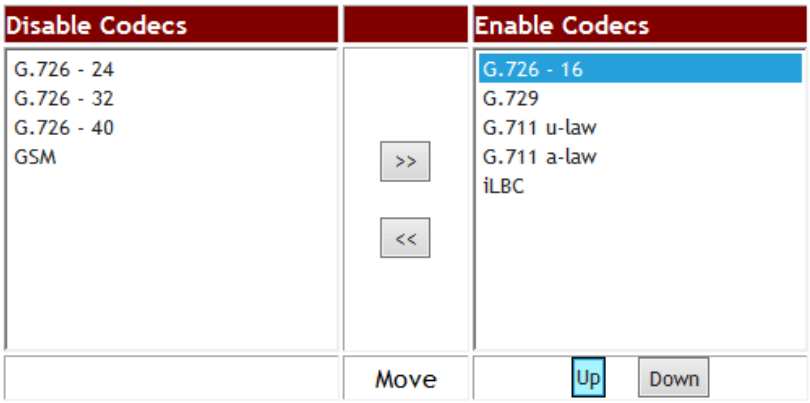
Item	Explanation
Disabled Codecs	Default: G.726.16, G.726.24, G.726.32, G.726.40, GSM. Disable these voice Codecs.
>> <<	>>: Move to Enable Codec area. <<: Move to Disable Codec area.

Item	Explanation
Enabled Codec	Default: G.729, G.711 u-law, G.711 a-law, iLBC. Provide using Codec items. The priority is according to the order of the screen. The default Setting of the first priority is G.729.
Move	>>: Select [Disable Codecs] item, press [>>] button, can move to Enable Codec area. >>: Select [Enable Codecs] item, press [<<] button, can move to Disable Codec area.
Up [Button]	Select [Endble Codec] item, press [Up] button, can move up the codec priority.
Down [Button]	Select [Endble Codec] item, press [Down] button, can move down the codec priority.
G.711 and G.729	Default: 20 ms; Set up the RTP Package Length of G.711 & G.729. Provide options: 10, 20, 30, 40, 50, 60, 70, 80, 90(ms).
iLBC	Default: 30 ms; Set up the RTP Package Length of iLBC. Provide options: 20, 30(ms).
Silence Suppression (VAD)	Default: Disable; Set up Silence Suppression (VAD). Provide options: Disable, Enable. When VAD detects that the users are in talking , Codec will send out messages to network. Theoretically, there is only one user talking and another one is listening in the same time, the listening one don't send out any voice, so VAD will send the messages of the talking one to network, therefore, VAD can lower amount of message about 30%.
Echo Canceller	Default: Disable; Setup Echo Cancel. Provide options: Disable, Enable.
Codec Type	Setup the information of Codec ID.
G726-16	Default: 23; When you Setup Custom, you can modify the Codec ID Value. This column can only be numbers; maximum length is 3 bytes with the range of 95~127. Provide options: Default, Custom. *: Please select Custom, before you modify Codec ID Value.
G726-24	Default: 22; This column can only be numbers; maximum length is 3 bytes with the range of 95~127. Provide options: Default, Custom.
G726-32	Default: 2; This column can only be numbers; maximum length is 3 bytes with the range of 95~127. Provide options: Default, Custom.
G726-40	Default is 21; This column can only be numbers; maximum length is 3 bytes with the range of 95~127. Provide options: Default, Custom.
RFC 2833	Default is 101; This column can only be numbers; maximum length is 3 bytes with the range of 95~127. Provide options: Default, Custom.
Submit [Button]	Save the Settings.

2.8.2.3.Operate Instruction

Example 1: Adjust Codec Order

Step 1: In [Code Setting] web page, Setup G.726 - 16 enable, move mouse on [Disabled Codecs: G.726 -16], then press [>>] button, can move to [Enabled Codecs] area, move mouse on this Codec, can use [Up] or [Down] button, adjust codec negotiation priority during call was established (See Figure 1).

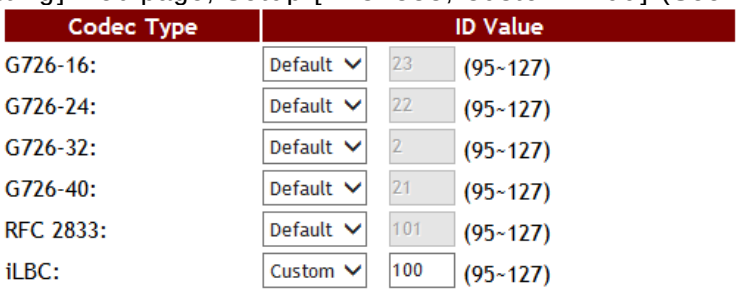


(Figure 1)

Step 2: The other site makes a call to you, when you pick up the call, LP399 will use this codec as the first priority to talk.

Example 2: Change Codec ID

Step 1: In [Code Setting] web page, Setup [RFC2833, Custom: 100] (See Figure 2).



(Figure 2)

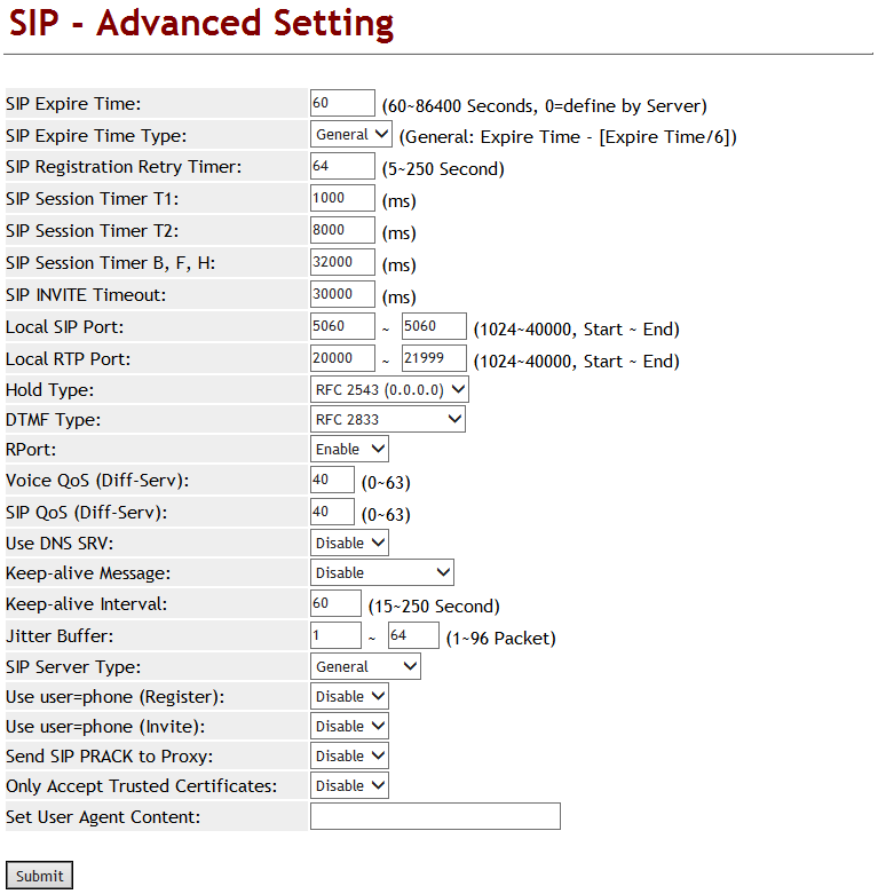
Note: If the other side sends you RFC-2833 not 100, LP399 will modify it to adjust the other side to communicate.

2.8.3. Advanced (Other Setting)

2.8.3.1. Functions

Provide Setting [SIP Expire Time, SIP/RTP Port, QoS, SIP Register Retry Time, Use DNS SRV, DTMF, PRACK] and etc.

2.8.3.2. Instruction


SIP - Advanced Setting
SIP Expire Time: 60 (60~86400 Seconds, 0=define by Server)
SIP Expire Time Type: General (General: Expire Time - [Expire Time/6])
SIP Registration Retry Timer: 64 (5~250 Second)
SIP Session Timer T1: 1000 (ms)
SIP Session Timer T2: 8000 (ms)
SIP Session Timer B, F, H: 32000 (ms)
SIP INVITE Timeout: 30000 (ms)
Local SIP Port: 5060 ~ 5060 (1024~40000, Start ~ End)
Local RTP Port: 20000 ~ 21999 (1024~40000, Start ~ End)
Hold Type: RFC 2543 (0.0.0.0)
DTMF Type: RFC 2833
RPort: Enable
Voice QoS (Diff-Serv): 40 (0~63)
SIP QoS (Diff-Serv): 40 (0~63)
Use DNS SRV: Disable
Keep-alive Message: Disable
Keep-alive Interval: 60 (15~250 Second)
Jitter Buffer: 1 ~ 64 (1~96 Packet)
SIP Server Type: General
Use user=phone (Register): Disable
Use user=phone (Invite): Disable
Send SIP PRACK to Proxy: Disable
Only Accept Trusted Certificates: Disable
Set User Agent Content:
Submit

Item	Explanation
SIP Expire Time	Default is 60; When this function is Set up to 0, the SIP Expire Time is according to the default value of Server. This column can only be numbers; maximum length is 5 bytes with the range of 60~86400 (seconds).
SIP Expire Time Type	Default: General. Provide options: General, 1/2, 2/3, 3/4, 4/5, 5/6, 6/7, 7/8, 8/9, 9/10. *This function must be supported by SIP Server or IP-PBX Server. The count formula of SIP Expire Time: General: SIP Expire Time-[(SIP Expire Time/30)*6] as SIP Expire Time > 60 seconds, if SIP Expire Time < 60 seconds, the SIP Expire Time subtract 5 seconds uniformly. 1/2: SIP Expire Time * 1/2. 2/3: SIP Expire Time * 2/3. 3/4: SIP Expire Time * 3/4. 4/5: SIP Expire Time * 4/5. 5/6: SIP Expire Time * 5/6. 6/7: SIP Expire Time * 6/7. 7/8: SIP Expire Time * 7/8. 8/9: SIP Expire Time * 8/9. 9/10: SIP Expire Time * 9/10.
SIP Registration Retry Timer	Default: 64 seconds. Set up the period of registering SIP Server again if LP399 fails to

Item	Explanation
	register SIP Server or IP-PBX server. This column can only enter numbers; maximum length is 4 bytes with the range of 5~3600 (seconds).
SIP Session Timer T1	Default: 1000 ms; Set up round-trip time (RTP) estimate. This column can only enter numbers; maximum length is 4 bytes with the range of 500~2000. *This function must be supported by Server.
SIP Session Timer T2	Default: 8000 ms. Set up the maximum retransmit interval for non-INVITE requests and INVITE responses. This column can only enter numbers; maximum length is 5 bytes with the range of 4000~16000. *This function must be supported by Server.
SIP Session Timer B, F, H	Default: 32000 ms. Set up the maximum retransmit interval for non-INVITE requests and INVITE responses. This column can only enter numbers; maximum length is 6 bytes with the range of 8000~128000. B: 64 * SIP T1; INVITE transaction timeout timer。 F: 64 * SIP T1; non-INVITE transaction timeout timer。 H: 64 * SIP T1, Wait time for ACK receipt. *This function must be supported by Server. For example, if T1 is 500 ms, T2 is 4 seconds and B,F,H is 32 seconds, then non-INVITE retransmissions occur at intervals of 500 ms, 1s, 2s, 4s, 4s, 4s, 4s, 4s, 4s, 4s. This means that retransmissions occur with an exponentially increasing interval that caps at T2. In this particular scenario, there are 10 retransmissions which is a total of 11 requests from UAC.
SIP INVITE Timeout	Default: 30000 ms; Set up SIP Invite, If how long do not respond, enter the failed state. This column can only enter numbers; maximum length is 5 bytes with the range of 8000~64000.
Local SIP Port	Default: 5060~5060. Set up the Start and End SIP Port Range of phone 1. This column can only enter numbers; maximum length is 5 bytes with the range of 1024~40000。 If you want to Set up a fixed port, please Set up the same value of Start and End Port. If you want to Set up a range, the left column is Start Port, the right Port is End Port.
Local RTP Port	Default: 20000~21999. Set up the Start and End RTP Port Range of phone 1. This column can only enter numbers; maximum length is 5 bytes with the range of 1024~40000. If you want to Set up a fixed port, please Set up the same value of Start and End Port. If you want to Set up a range, the left column is Start Port, the right

Item	Explanation
	Port is End Port.
Hold Type	Default: RFC 2543 (0.0.0.0). Set up Hold (define by RFC). When this function is on, the information of [Connection Information (c): IN IP4 xxx.xxx.xxx.xxx] will change IP to the device of executing the function. Provide options: RFC2543 (0.0.0.0), Type1 (Send only), Type2 (inactvie).
DTMF Type	Default: RFC 2833. InBand: When you enter key information, the [Ethereal] will not show it. RFC2833: When you enter key information, the [Ethereal] will show [RTP Event]. SIP Info: When you enter key information, the [Ethereal] will show [Request: Info]. Provide options: InBand, RFC2833, SIP Info. RFC2833 + Inband: When you enter key information, LP399 sends Inband message and [RTP Event] message. SIP Info + Inband: When you enter key information, LP399 sends Inband message and [Request: Info] message.
RPort	Default: Disable; Set up RPort function. When this function is on, the [Rport] message will add in [Message Header]. Provide options: Disable, Enable. *This function must be supported by Server.
Voice QoS (Diff-Serv)	Default: 40; This column can only enter numbers; maximum length is 2 bytes with the range of 0~63.
SIP QoS (Diff-Serv)	Default: 40; This column can only enter numbers; maximum length is 2 bytes with the range of 0~63.
Use DNS SRV	Default: Disable. When this function is on, the package will show [DNS, Standard query SRV_sip_upd.xxx.xxx.xxx]. Provide options: Disable, Enable. *This function must be supported by Server.
Keep-alive Message	Default: Disable; When this function is on and system is in NAT, LP399 will send a package to Server periodically according to [Send Keep Alives Packet]. Provide options: Disable, Send UDP, Send SIP Option. Send UDP: Use UDP format to send; For example: UDP, Source Port: sip Destination Port: xxxx. Send SIP Optoin: Use SIP Option format to send; For example: SIP, Request-Line: OPTIONS sip:xxx.xxx.xxx.xxx;user=phone SIP/2.0.
Keep-alive Interval	Default: 60; This column can only enter numbers; maximum length is 3 bytes with the range of 15~250.
Jitter Buffer	Default: 1~64; Set up Jitter Buffer. In VoIP system, the time of every voice package arrives destination will affect by Network Delay. Therefore, Jitter Buffer is used in destination

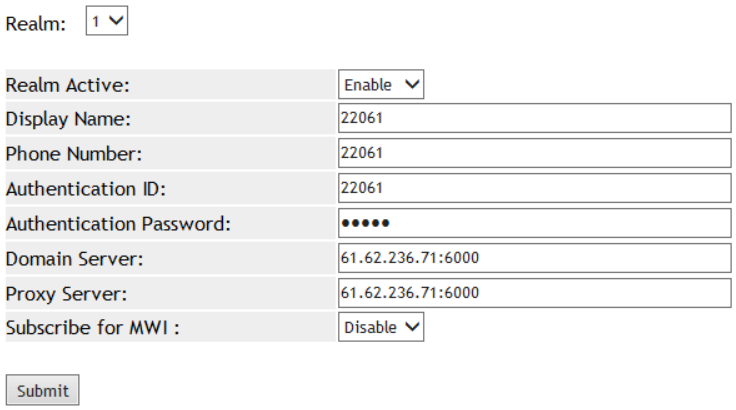
Item	Explanation
	to modify the order of packages and adjust the time of Voice Playout Delay, this function will raise the voice quality. This column can only enter numbers; maximum length is 3 bytes with the range 0~32.
SIP Server Type	Default: General. Set up the type of SIP Server. In accordance with market available different SIP Servers or IP-PBX server, LP399 will adjust its configuration to be compatible with these SIP Server. Provide options: General, Asterisk, BroadWorks, Nortel, Xener, Vodtel, SKTelink. * Please make sure which model of SIP Server or IP-PBX server for LP399 IP Phone to work with in order to select suitable SIP Server Type.
Use user=phone (Register)	Default: Disable; When this function is on, the Register Header will add "user=phone" message in Register packages. Provide options: Disable, Enable. *This function must be supported from SIP Server.
Use user=phone (Invite)	Default: Disable; When this function is on, the Invite Header will add "user=phone" message in Invite packages. Provide options: Disable, Enable. *This function must be supported from SIP Server.
Send SIP PRACK of Proxy	Default: Disable; When this function is on, there will add "PRACK Header" messages. Provide options: Disable, Enable. *This function must be supported from SIP Server.
Only Accept Trusted Certificates	Default: Disable; Set up call from platform to accept only, don't accept IP call. When enable, Receive calls from non-platform, then device does not respond. Provide drop-down options: Disable, Enable.
Set up User Agent Content	Default: (null); When send SIP packets, the packets header "User-Agent" message will join this word. This column can enter numbers and strings (support: 0~9, a~z, @, _, -, *, #, ., +, :, () [,] and blank); maximum length is 46 bytes. Example: User-Agent: LP399
Submit [Button]	Save the Settings.

2.8.3.3. Operate Instuction

Example 1: SIP Expire Time

◆ **SIP Expire Time: 60**

Step 1: In [Service Domain Setting] web page, Set up [Realm Active: Enable, Display Name: 22061, Phoner Number: 22061, Authentication ID: 22061, Authentication Password: test, Domain Server: 61.62.236.71:6000, Proxy Server: 61.62.236.71:6000, Subscribe for MWI: Disable] (See Figure 1).



(Figure 1)

Step 2: In [SIP – Advanced Setting] web page, Set up [SIP Expire Time: 60] (See Figure 2).

(Figure 2)

Step 3: When registering to Server successfully, LP399 will send a register package every 55 seconds.

◆ SIP Expire Time: 0 (by server)

Step 1: In [Service Domain Setting] web page, Set up [Realm Active: Enable, Display Name: 22061, Phoner Number: 22061, Authentication ID: 22061, Authentication Password: test, Domain Server: 61.62.236.71:6000, Proxy Server: 61.62.236.71:6000, Subscribe for MWI: Disable] (See Figure 1).

Step 2: In [SIP – Advanced Setting] web page, Set up [SIP Expire Time: 0 (the register time is defined by Server)] (See Figure 3).

(Figure 3)

Step 3: System will register to Server according to the period that defined by Server.

Example 2: Use DNS SRV

◆ Use DNS SRV: Enable

Step 1: Set up register SIP account Settings first, then use [Domain] to register SIP Server. (See Figure 4).

(Figure 4)

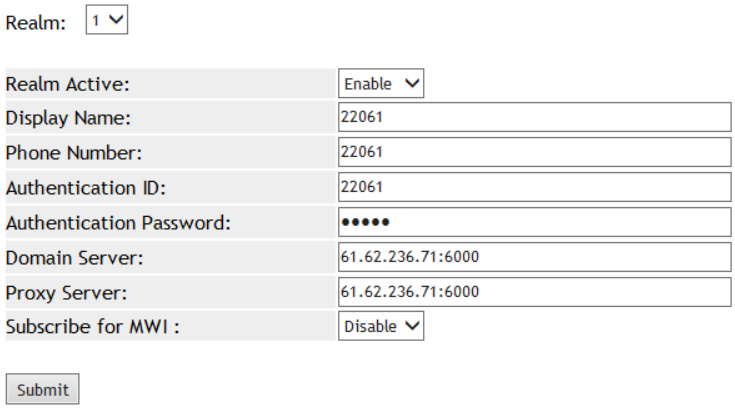
Step 2: In [SIP – Advanced Setting] web page, Set up [Use DNS SRV: Enable] (See Figure 5)

(Figure 5)

Example 3: Keep Alives Message

◆ **Keep Alives Message: Send UDP**

Step 1: Set up register SIP account settings (See Figure 6).



(Figure 6)

Step 2: In [SIP – Advanced Setting] web page, Set up [Keep Alives Message: Send UDP, Keep Alives Interval: 150] (See Figure 7).

(Figure 7)

◆ **Keep Alives Message: Send SIP Info**

Step 1: Set up register SIP account Settings (See Figure 6).

Step 2: In [SIP – Advanced Setting] web page, Set up [Keep Alives Message: Send SIP Option, Keep Alives Interval: 150] (See Figure 8).

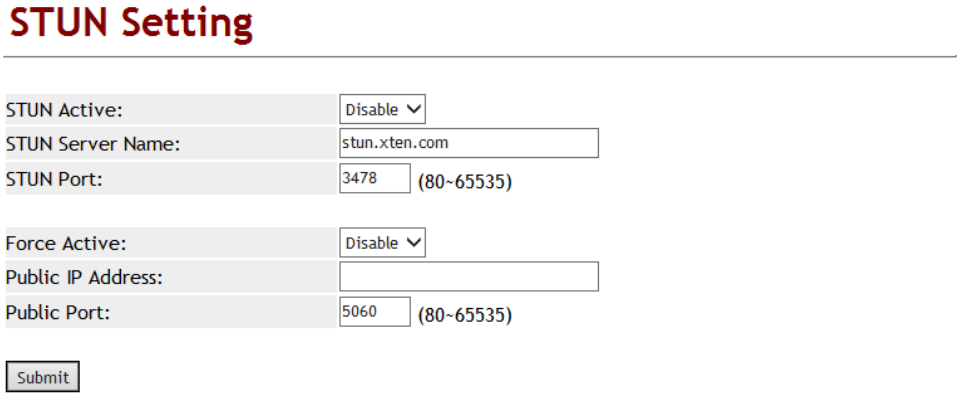
(Figure 8)

2.8.4. STUN (STUN & Force Setting)

2.8.4.1. Functions

STUN Provides function to set up STUN and Force feature.

2.8.4.2. Instruction



Item	Explanation

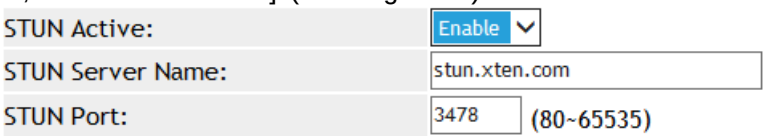
STUN Active	Default: Disable; When this function is on, STUN functions Enable. Provide options: Disable, Enable.
STUN Server Name	Default: stun.xten.com; This column can enter IP or Domain Name with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes.
STUN Port	Default: 3478; This column can only enter numbers; maximum length is 5 bytes with the range 80~65535.
Force Active	Default: Disable; When this function is on, the IP of [SIP infor] in [Ethereal] will replace by the assigned IP address. Provide options: Disable, Enable.
Public IP Address	Set up Router's public IP address; This column can only enter IP with the format of xxx.xxx.xxx.xxx; maximum length is 63 bytes.
Public Port	Default: 5060; Set up Router's public Port. This column can only enter numbers; maximum length is 5 bytes with the range of 80~65535.
Submit [Button]	Save the settings.

2.8.4.3. Operate Instruction

Example 1: STUN

Step 1: Please Set up the SIP account first.

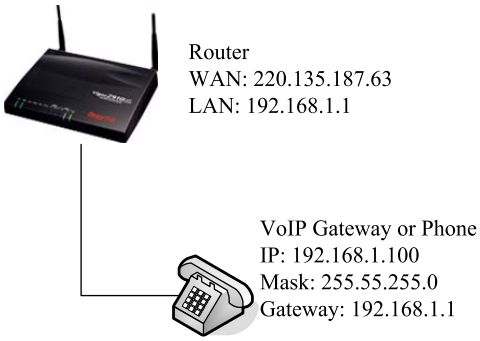
Step 2: In [STUN Setting] web page, Set up [STUN Active: Enable, STUN Server Name: stun.xten.com, SUTN Port: 3478] (See Figure 1).



(Figure 1)

Example 2: Force

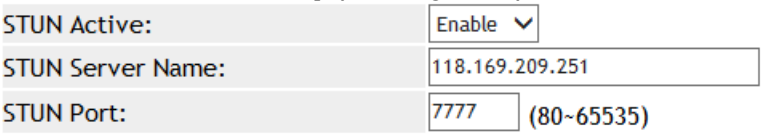
The structure figure (See Figure 2):



(Figure 2)

Step 1: Please set up the SIP account first.

Step 2: In [STUN Setting] web page, set up [Force Active: Enable, Public IP Address: 118.169.209.251, Public Port: 7777] (See Figure 3).



(Figure 3)

2.9. Management (Advanced Settings)

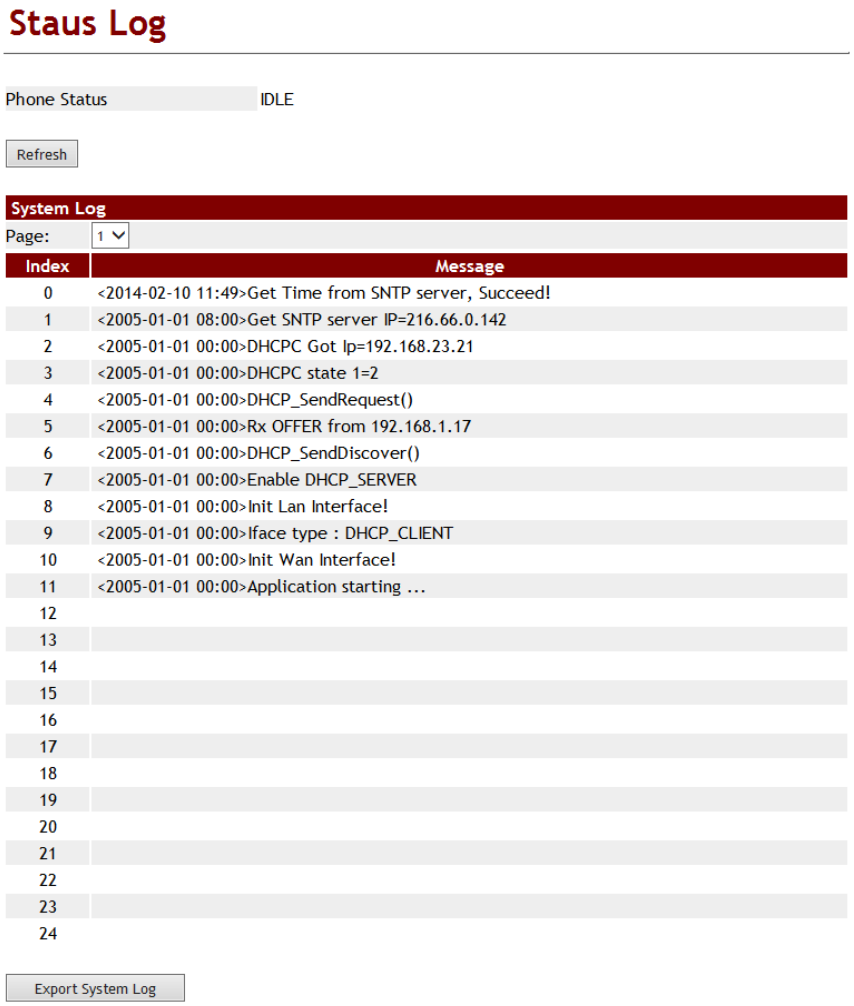
Provide [Status Log, Auto Provision, Auto Update, Firmware, Advanced, Passowrd, Tones, Default, Language].

2.9.1. Status Log (System Status)

2.9.1.1. Functions

Status Log Provide the running status of the system.

2.9.1.2. Instruction



Item	Explanation
Phone Status	Show the Phone user status now; The status has: IDLE, Off-Hook. IDLE: Ready Off Hook: in use.
Refresh [Button]	Refresh the Phone status.
Status Log	System work status message.
Page	Default: 1 (Page 1), Select page. Provide drop-down options:1~xx; The page increases to next one in accordance with the amount of data to increase automatically.
Index	Show index number.
Message	Show the information of the system. Example: <2014-02-10 11:49> Get Time from SNTP server, Succeed! <2014-02-10 11:49>: Show the time of message. Get Time from SNTP server, Succeed! : Shows the content of message.

Item	Explanation
Export System Log [Button]	Save [Stauts Log] data to log file; System default file name is Syslog.log.

2.9.1.3. Operate Instruction

Example 1: Check Phone Status

Step 1: In [Status Log] web page, When the phone don't in use, [Phone Status] will show [IDLE] (See Figure 1).

(Figure 1)

Step 2: When pick up the handset, In [Status Log] web page, Press [Refresh] button, The [Phone Status] show [Off Hook] (See Figure 2).

(Figure 2)

Example 2: Check System Log

Step 1: In [Status Log] web page, Select web page, the page will show other pages data. (See Figure 3).

System Log

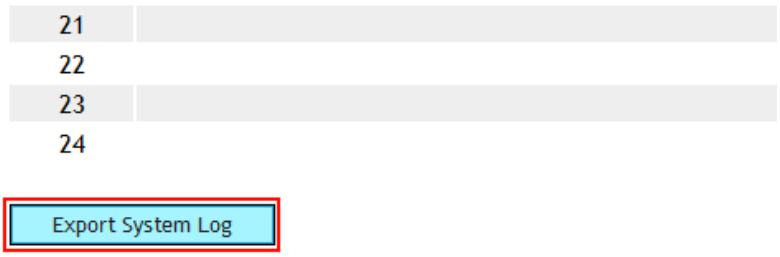
Page: 1

Index	Message
0	<2014-02-10 11:49>Get Time from SNTP server, Succeed!
1	<2005-01-01 08:00>Get SNTP server IP=216.66.0.142
2	<2005-01-01 00:00>DHCPC Got Ip=192.168.23.21
3	<2005-01-01 00:00>DHCPC state 1=2
4	<2005-01-01 00:00>DHCP_SendRequest()
5	<2005-01-01 00:00>Rx OFFER from 192.168.1.17
6	<2005-01-01 00:00>DHCP_SendDiscover()
7	<2005-01-01 00:00>Enable DHCP_SERVER
8	<2005-01-01 00:00>Init Lan Interface!
9	<2005-01-01 00:00>Iface type : DHCP_CLIENT
10	<2005-01-01 00:00>Init Wan Interface!
11	<2005-01-01 00:00>Application starting ...
12	

(Figure 3)

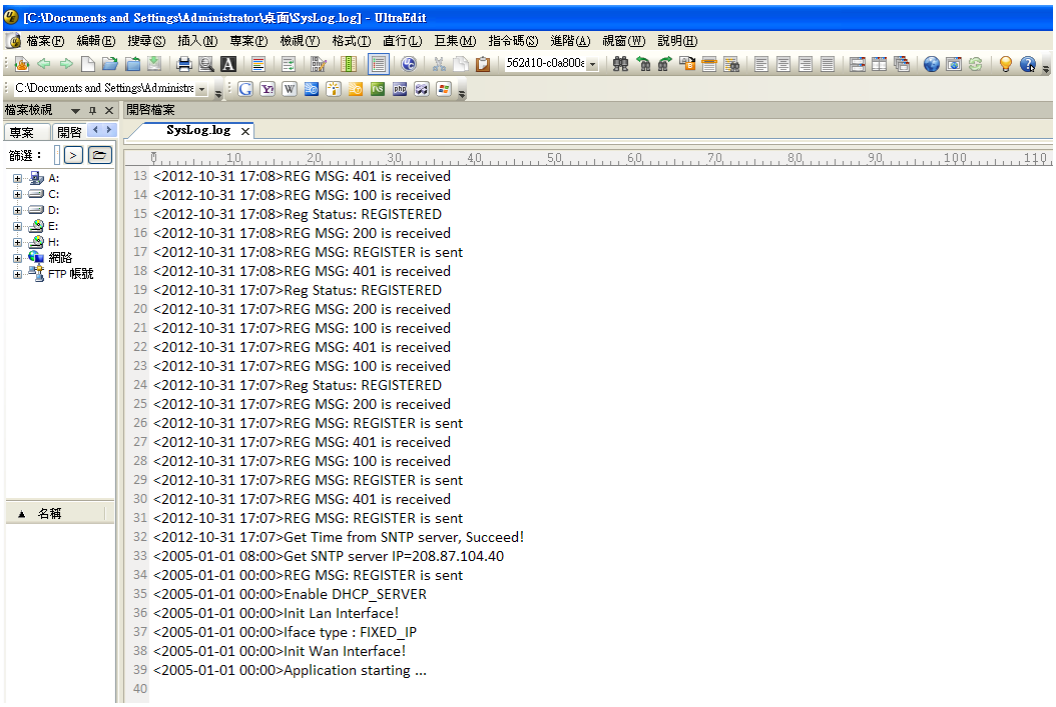
Example 2: Save System Log File

Step 1: In [Status Log] web page, press [Export System Log] button, Enter [Save File] menu, Then press [Save] button (See Figure 4).



(Figure 4)

Step 2: Save file completely, Any text editor can open [SysLog.log] file (See Figure 5).



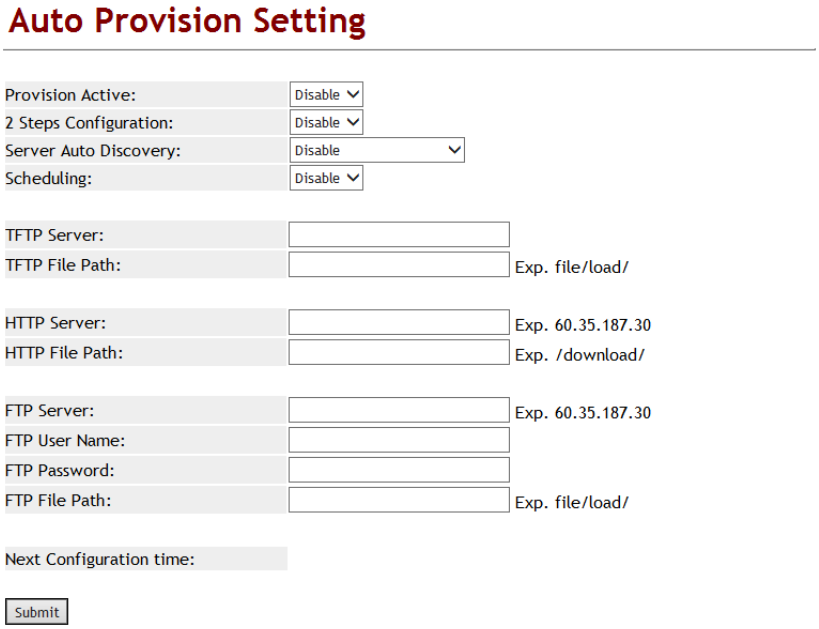
(Figure 5)

2.9.2. Auto Provision (Configuration Automatically)

2.9.2.1. Functions

Provide the types of HTTP, FTP and TFTP to update the configuration.

2.9.2.2. Instruction



Item	Explanation
Provision Active	Default: Disable; When this function is on, LP399 will download the MACID.dat from the designated Server. Provide options: Disable, TFTP, FTP and HTTP.
2 Steps Configuration	Default: Disable; Set up 2 Steps configuration, get the common settings first, then get the SIP accounts and passwords secondly. Provide options: Disable, Enable. *This function must be supported from SIP Server.

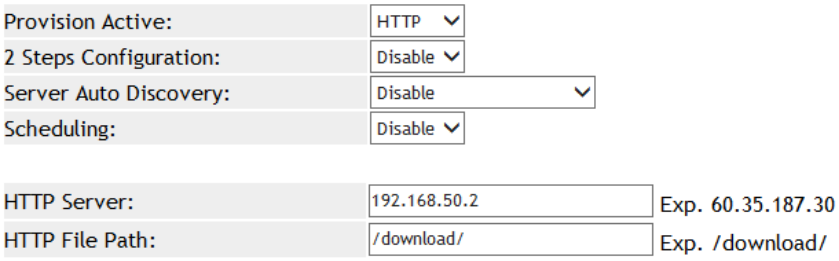
Item	Explanation
Server Auto Discovery	Default: Disable; DHCP TFTP Option 66 (TFTP): DHCP Server will offer the Option 66 Server IP address into the column of system [TFTP Server] when it assigns IP. Broadcasting: Discovering the Server by broadcasting, the Server will send the information of Type and Server to LP399, it will fill in these information to the corresponding columns. Provide options: Disable, DHCP TFTP Option 66 (TFTP), Broadcasting. *This function must be supported by Server.
Scheduling	Default: Disable; Execute the Configuration regularly. When this function is on, system will check the Configuration Server by [Next Config Time]. Provide options: Disable, Enable. Note: The time parameter use [Auto Update Setting] web page's [Scheduling Time & Date].
TFTP Server	This column can only enter IP with the format of xxx.xxx.xxx.xxx; maximum length is 15 bytes.
TFTP File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, ex: 123/.
HTTP Server	This column can enter IP or Domain Name; maximum length is 63 bytes.
HTTP File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, ex: 123/.
FTP Server	This column can enter IP or Domain Name; maximum length is 63 bytes.
FTP User Name	This column can enter IP or Domain Name; maximum length is 63 bytes.
FTP Password	This column can enter IP or Domain Name; maximum length is 63 bytes.
File File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, ex: 123/.
Next Configuration Time	System will check the Configuration Server when the Next config time is up. The start counting date is the next day, so the Next configuration time will add one day. Count rule： the next day + days + time period + MACaddress + random number = Next config time.
Submit [Button]	Save the settings.

2.9.2.3. Operate Instruction

Example 1: Configuration by HTTP

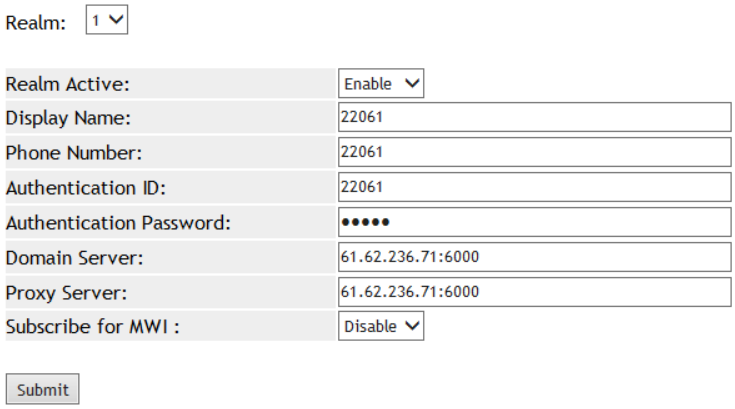
Step 1: Please complete MACID.dat first, and place it at the path of the designated Server.

Step 2: In [Auto Provision Setting] web page, Set up [Provision Active: HTTP, HTTP Server: 192.168.50.2, HTTP Path: /download/] (See Figure 1).



(Figure 1)

Step 3: In [Service Domain Setting] web page, Check [Realm: 1] Settings, Use [MACID.dat] file to load configuration (See Figure 2).

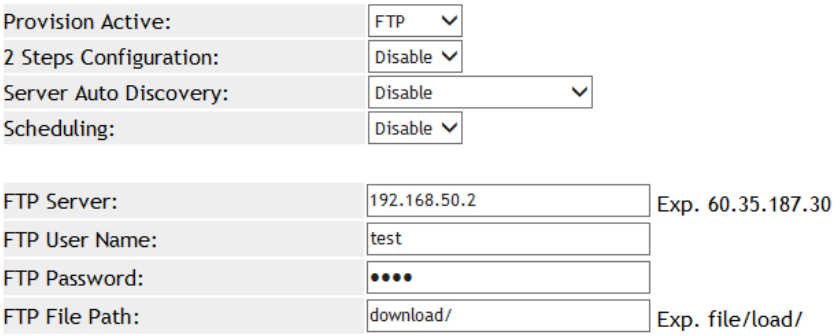


(Figure 2)

Example 2: Configuration by FTP

Step 1: Please complete MACID.dat first, and place it at the path of the designated Server.

Step 2: In [Auto Provision Setting] web page, Set up [Provision Active: FTP, FTP Server: 192.168.50.2, FTP User Name: test, FTP Password: test, FTP File Path: download/] (See Figure 3).

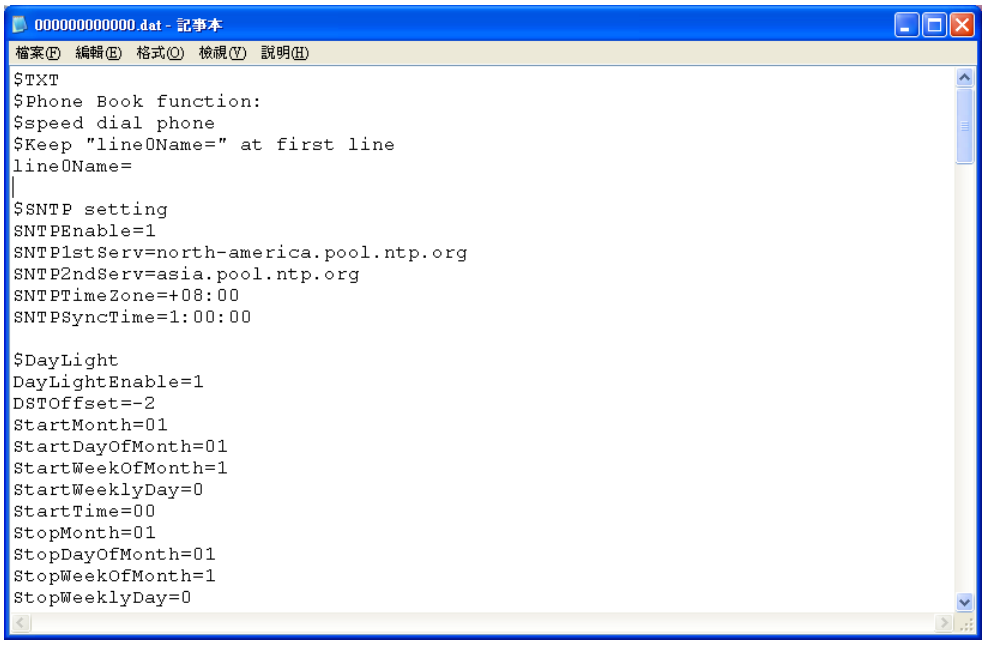


(Figure 3)

Step 3: In [Service Domain Setting] web page, Check [Realm: 1] Settings, Use [MACID.dat] file to load configuration.

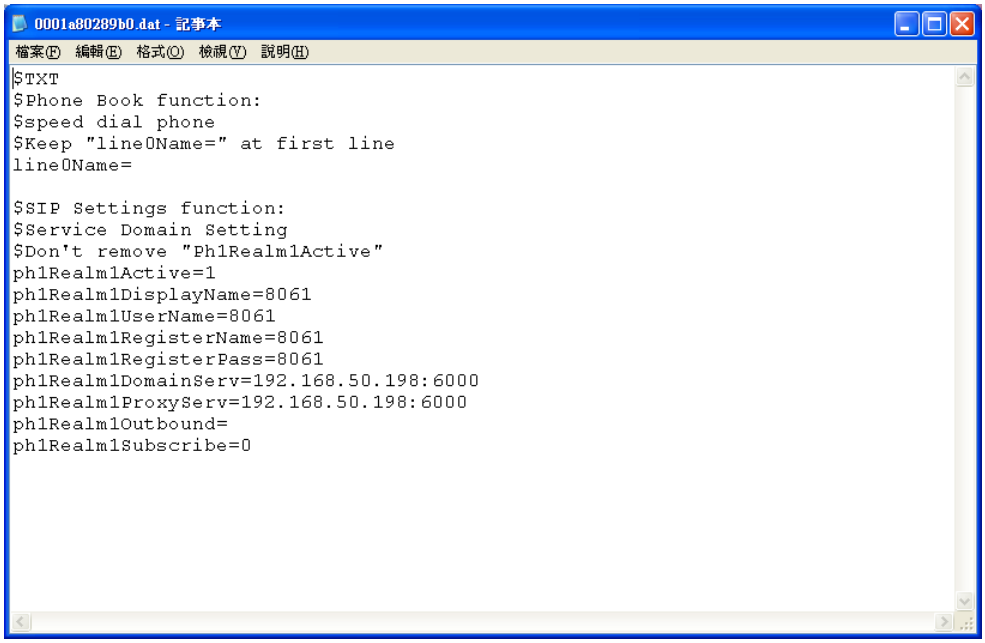
Example 3： Set up 2 Steps configuration (not encryption)

Step 1: Build a common MAC file with name [000000000000.dat], the file does not contain [$Service Domain Setting] data, (See Figure 4).



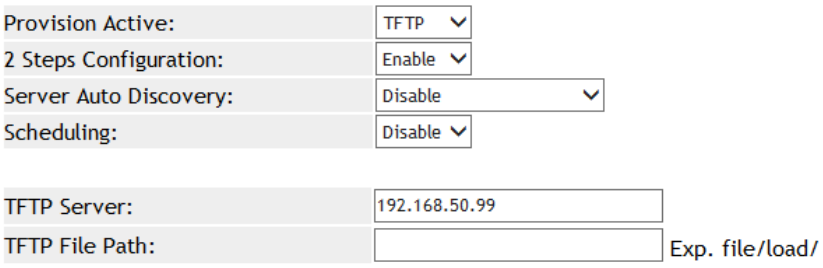
(Figure 4)

Step 2. Set up the [$Service Domain Setting] data, and [line0Name=, ph1Realm1Active=1] cannot be deleted (See Figure 5).



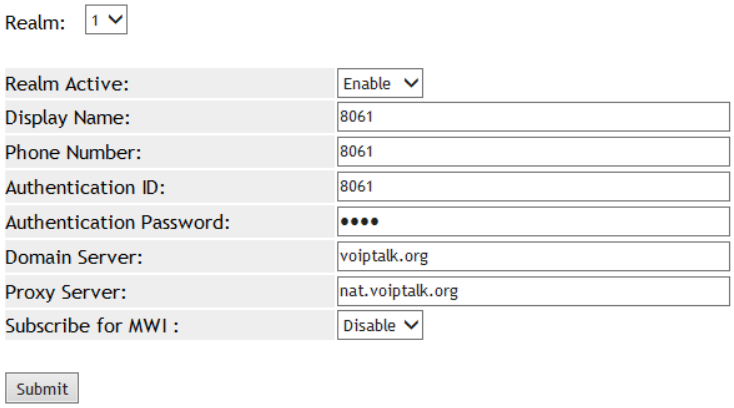
(Figure 5)

Step 3: On [Auto Configuration Setting], Set up [Type: TFTP, 2 Steps Configuration: Enable, TFTP Server: 192.168.50.99] (See Figure 6).



(Figure 6)

Step 4: In [Service Domain Setting] web page, Check [Realm: 1] Settings, Use [MACID.dat] file to load configuration (See Figure 7).



(Figure 7)

Example 4： Server Auto Discover

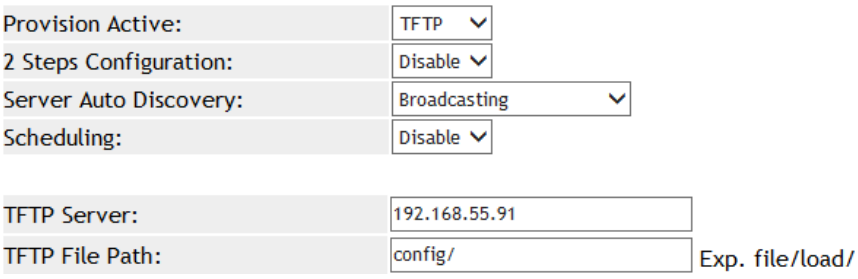
◆ Broadcasting

Step 1: In [Auto Provision Setting] web page, Set up [Provision Active: TFTP, Server Auto Discover: Broadcasting] (See Figure 8).

(Figure 8)

Step 2: In [Auto Provision Setting] web page, Check [Provision Active: TFTP, TFTP Server: 192.168.55.91, TFTP File Path: config/] (See Figure 9).

Note：If starts TFTP Server at the same time, this field parameter can't see data. Because of this data upload provision function by TFTP Server.



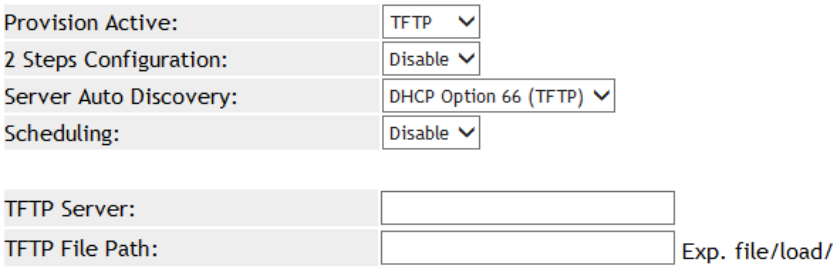
(Figure 9)

Step 3: Enter [Service Domain Setting] web page, check [Realm No.: 1] Settings, Use [MACID.dat] file to load configuration.

◆ DHCP Option 66 (TFTP) (Please refer to DHCP Turbo and TFTP Turbo documents)

Step 1: Install [DHCP Turbo + TFTPd32] software, then placed [MACID.dat] file into the specified directory.

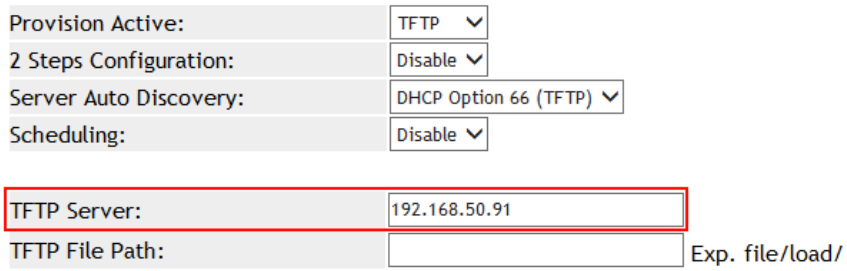
Step 2: In [Auto Provision Setting] web page, Set up [Provision Active: TFTP, Server Auto Discover: DHCP Option 66 (TFTP)] (See Figure 10).



(Figure 10)

Step 3: In [Auto Provision Setting] web page, Check [TFTP Server] field, upload this data (See Figure 11).

Note : If start TFTP Server at the same time, This field parameter can't see data, Because this data upload provision function by TFTP Server.



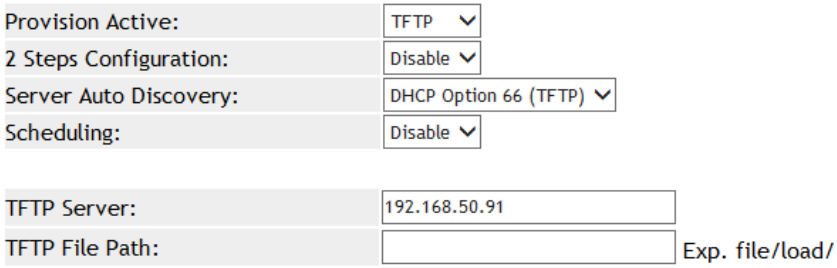
(Figure 11)

Step 6: Enter [Service Domain Setting] web page, Check [Realm: 1] Setting, Use [MACID.dat] file to load configuration.

◆ DHCP Option 66 (TFTP)-2 (Please refer to DHCP Turbo document)

Step 1: Install [DHCP Turbo + TFTP Turbo] software, Then placed [MACID.dat] file into the specified directory.

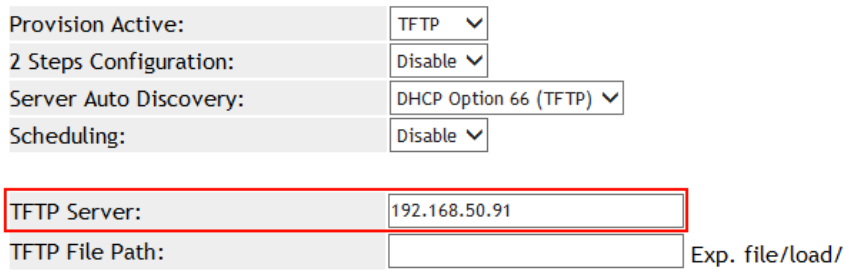
Step 2: In [Auto Provision Setting] web page, Set up [Provision Active: TFTP, Server Auto Discover: DHCP Option 66 (TFTP)] (See Figure 12).



(Figure 12)

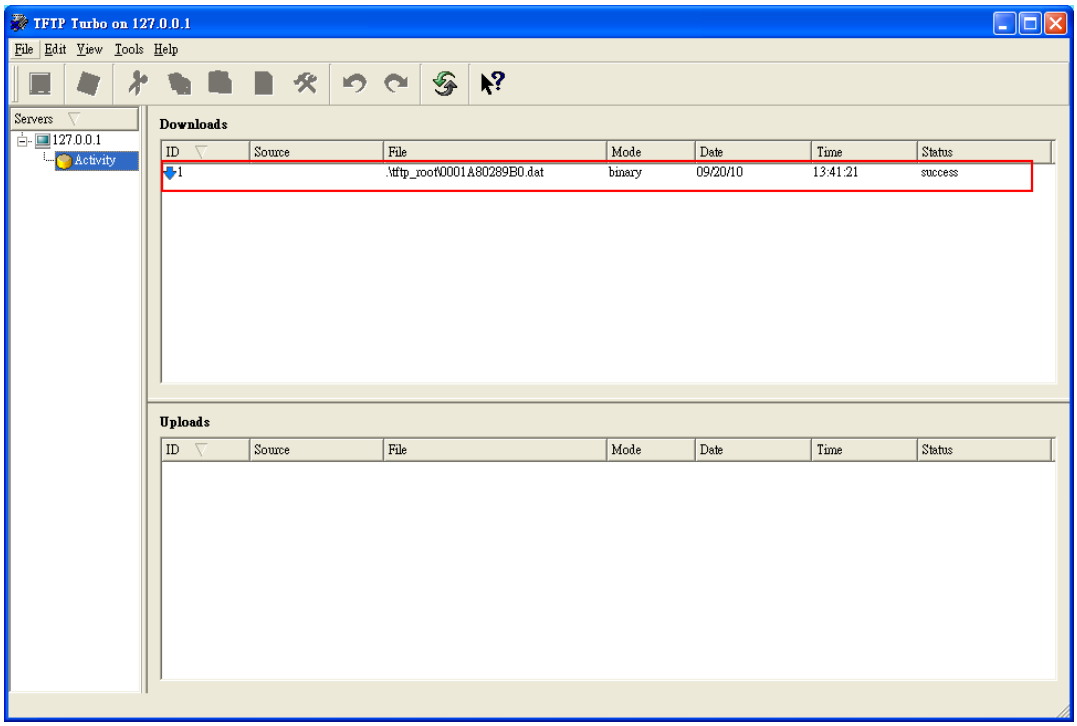
Step 3: In [Auto Provision Setting] web page, Check [TFTP Server] field, the field will upload this data (See Figure 13).

Note : If start TFTP Server at the same time, This field parameter can't see data, Because this data upload provision function by TFTP Server.



(Figure 13)

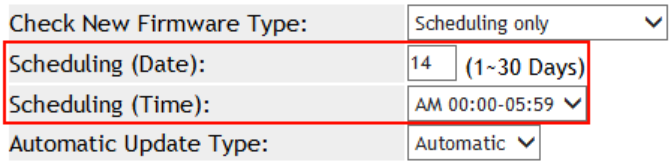
Step 4: In [TFTP Turbo Server] menu, can check [Download] status, The page can view and the device will come to download [MACID.dat] file (See Figure 14).



(Figure 14)

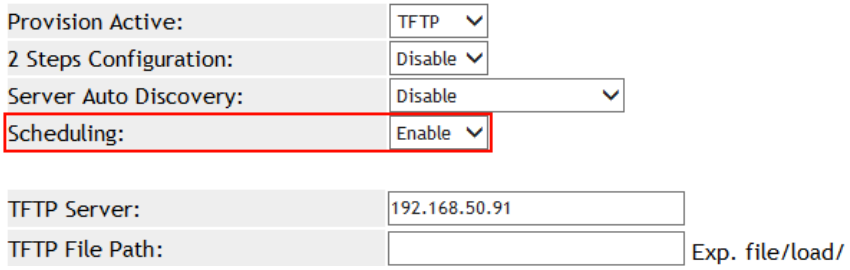
Example 5：Auto-Provision By Scheduling

Step 1: In [Auto Update Setting] web page, Set up [Scheduling (Date): 14, Scheduling (Time): AM 00:00 -5:59] (See Figure 15).



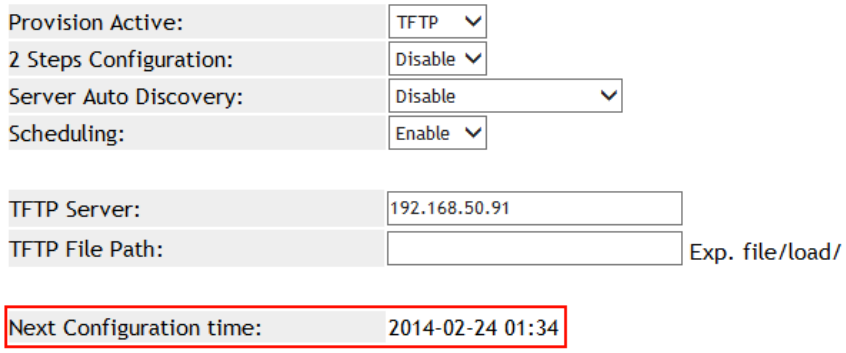
(Figure 15)

Step 2: In [Auto Provision Setting] web page, Set up [Provision Active: TFTP, Scheduling: Enable, TFTP Server: 192.168.50.91] (See Figure 16).



(Figure 16)

Step 3: Return [Auto Update Setting] web page; In [Next Configuration Time] field, the field will show upgrade date and time at next time (See Figure 17).



(Figure 17)

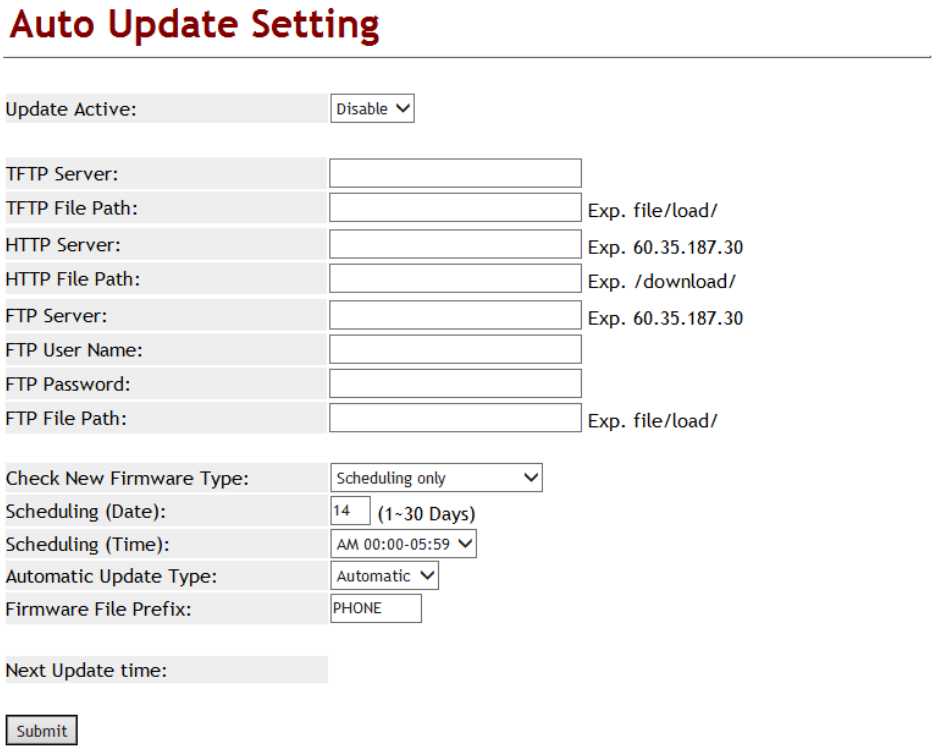
Note: How to establish MAC File data, Please refer『Auto_provision_1.ppt』file.

2.9.3. Auto Update (Firmware Auto Upgrade)

2.9.3.1. Functions

Provide the types of TFTP, FTP, HTTP to update the firmware in **ssh** type.

2.9.3.2. Instruction



Item	Explanation
Update Active	Default: Disable; When this function is on, LP399 will update the firmware from the designate Auto provision Server. Provide options: Disable, TFTP, FTP and HTTP.
TFTP Server	This column can only enter IP with the format of xxx.xxx.xxx.xxx; maximum length is 15 bytes.
TFTP File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, for instance: 123/.
HTTP Server	This column can enter IP or Domain Name; maximum length is 63 bytes.
HTTP File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, ex: 123/.
FTP Server	This column can enter IP or Domain Name; maximum length is 63

Item	Explanation
	bytes.
FTP User Name	This column can enter IP or Domain Name; maximum length is 63 bytes.
FTP Password	This column can enter IP or Domain Name; maximum length is 63 bytes.
File File Path	This column can enter numbers or strings; maximum length is 63 bytes with the "/" in the end, ex: 123/.
Check new Firmware Type	Default: Scheduling Only. Set up the type for checking new firmware. - Power on and Scheduling: Check the new firmware when powers on and base on Scheduling - Scheduling: According to [Next Update Time] to check the new firmware. Provide options: Power on and Schedule, Scheduling Only. * Power on and Scheduling: When LP399 discovers a new firmware which is different with current one, it will not update immediately. But you will hear a hint tone or see a [Found new s/w] message on LCD. You should update firmware by your decision.
Scheduling (Date)	Default: 14 (day). This column can only enter numbers; maximum length is 2 bytes with a range of 1~30.
Scheduling (Time)	Default: AM 00:00 – 05:59. Provide options: AM 00:00 – 05:59, AM 06:00 – 11:59, AM 12:00 – 17:59, AM 18:00 – 23:59.
Automatic Update Type	Default: Notify only. Set up the type to update firmware. Provide option: Notify only, Automatic. - Notify only: When LP399 discover a new firmware, it will not update firmware immediately. But you will hear a hint tone from LP399 or see a [Found new s/w] message on LCD display. - Automatic: Update firmware automatically.
Firmware File Prefix	Default is production model. This is used to judge which model ask for update, such as Phone or ATA. This column can enter numbers or strings; maximum length is 8 bytes.
Next Update Time	LP399 will check the Update Server when the Next Update time is up. The start counting date is the next day, so the Next Update time will add one day. Count rule： the next day + days + time period + MACaddress + random number = Next Update time.
Submit [Button]	Save the Settings.

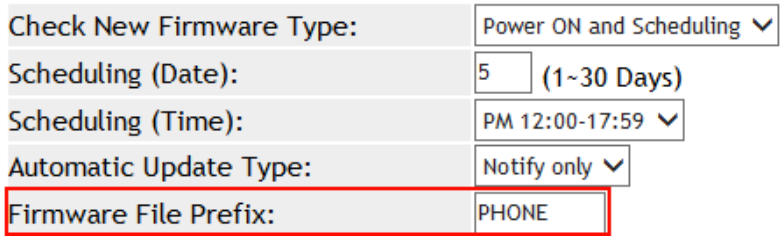
Note: Update By Youself
Step 1: Display [Found new s/w] message on LCD display of LP399.
Step 2: Press the [MENU] key to enter menu, select [6. Administrator→ 2. Upgrade System→1. Upgrade Now→ 1. Yes], then LP399 will update firmware automatically.

Special Note：When LP399 IP Phone starts to upgrade firmware, it takes several minutes to upgrade (about 2~3 minutes). In this duration, it can not dial any call feature. Don't remove electric power in upgraded duration. Otherwise, the flash memory may be damaged permanatly and can not be recovered.

2.9.3.3. Operate Instruction

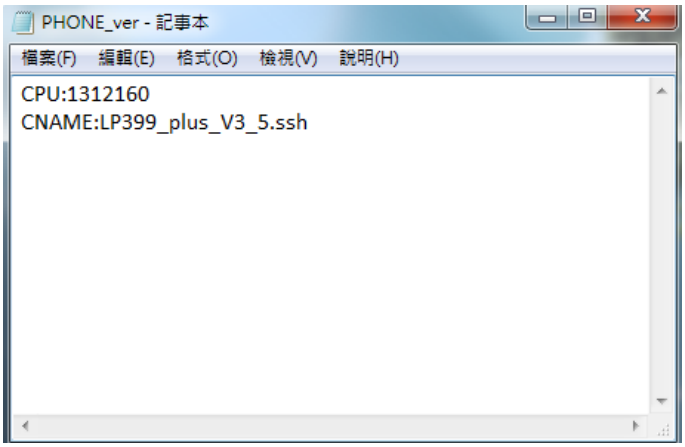
Example 1: Build an Auto Update File [*_ver.dat]**

Step 1: The filename for checking firmware version, the filename is according to [Firmware File Prefix] on [Auto Update Setting] and adds [_ver.dat] to be [filename_ver.dat], (See Figure 1).
Ex：Firmware File Prefix: PHONE, the filename for checking firmware version is TA1S_ver.dat.
Pay attention to [Firmware File Prefix], the name must be the same with ***_ver.dat.



(Figure 1)

Step 2: After build a [PHONE_ver.dat] file, there must have [CPU, CNAME] two data to compare with updating file in Server. If the Server one is newer than your existing one, then your LP399 will update firmware, (See Figure 2).



(Figure 2)

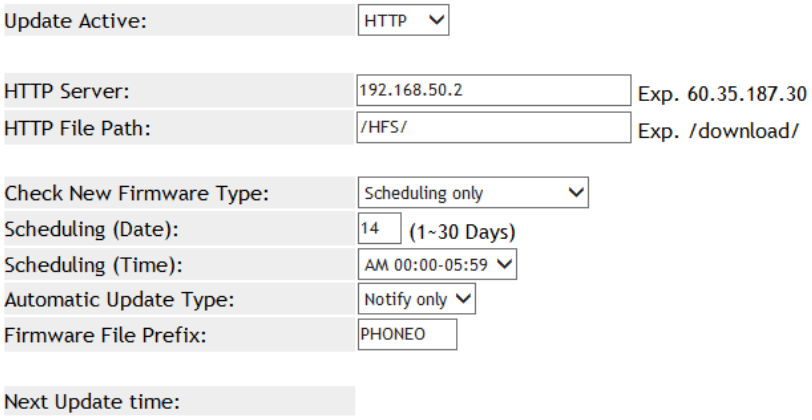
Note:
CPU: The date of updating file, it can only enter numbers.
CNAME: The updating filename, please enter a complete name without space or signs.

Step 3: Please place ***_ver.dat and *.ssh files in the designated folder of the Server.

Example 2: Check New Firmware Type

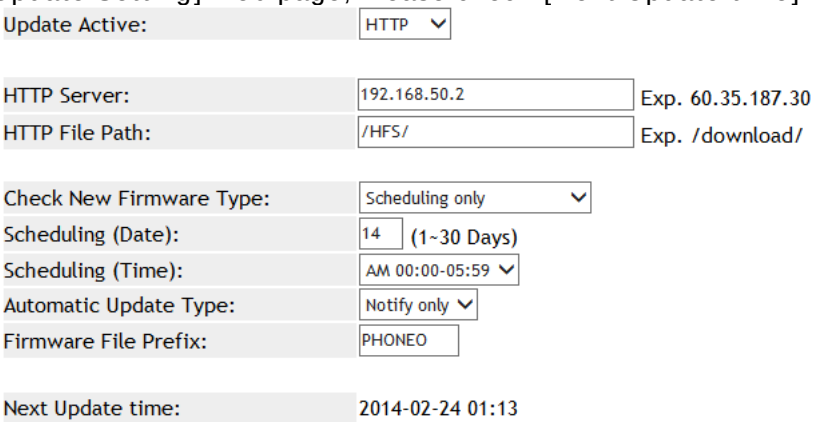
◆ **Check New Firmware Type: Scheduling only (Upgrade Automatically)**

Step 1: In [Auto Update Setting] web page, Set up [Update Active: HTTP, HTTP Server: 192.168.50.2, HTTP File Path: /HFS/, Check New Firmware Type: Scheduling only, Scheduling (Date): 14, Scheduling (Time): AM 00:00-05:59, Automatic Update: Automatic, Firmware File Prefix: PHONEO] (See Figure 3).


Update Active: HTTP
HTTP Server: 192.168.50.2 Exp. 60.35.187.30
HTTP File Path: /HFS/ Exp. /download/
Check New Firmware Type: Scheduling only
Scheduling (Date): 14 (1~30 Days)
Scheduling (Time): AM 00:00-05:59
Automatic Update Type: Notify only
Firmware File Prefix: PHONEO
Next Update time:

(Figure 3)

Step 2: In [Auto Update Setting] web page, Please check [Next Update time] (See Figure 4).


Update Active: HTTP
HTTP Server: 192.168.50.2 Exp. 60.35.187.30
HTTP File Path: /HFS/ Exp. /download/
Check New Firmware Type: Scheduling only
Scheduling (Date): 14 (1~30 Days)
Scheduling (Time): AM 00:00-05:59
Automatic Update Type: Notify only
Firmware File Prefix: PHONEO
Next Update time: 2014-02-24 01:13

(Figure 4)

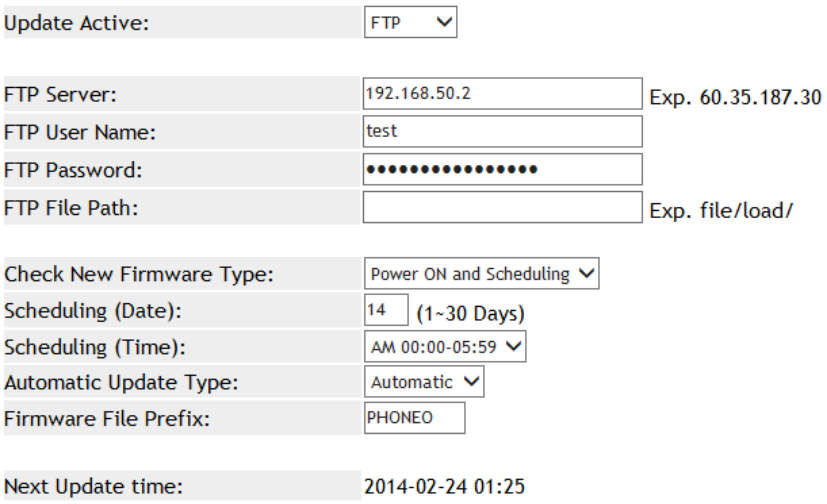
Step 3: When [Next Update Time] is arrived, LP399 will connect with HTTP Server to check the firmware version.

Step 4: When LP399 downloads [PHONEO_ver.dat] file completely, it will compare the [CPU] information with current version. If the current version is older than server's one, LP399 will check [CNAME] parameter and download [PHONEO_1019011.ssh] from the designated Server.

◆ Check New Firmware Type: Power on and Scheduling (Manually Upgrade)

Step 1: Please build the file of checking firmware version [PHONEO_ver.dat] file and place it in the folder of designated Server with new *.ssh file.

Step 2: In [Auto Update Setting] web page, Set up [Type: FTP, FTP Server: 192.168.50.2, FTP User Name: test, FTP Password: test, Check New Firmware Type: Power on and Scheduling, Scheduling (Date): 14，Scheduling (Time): AM 00:00-05:59, Automatic Update: Automatic, Firmware File Prefix: PHONEO] (See Figure 5).



(Figure 5)

Step 3: In [Auto Update Setting] web page, check the next updating time of [Next Update time] (See Figure 5).

Step 4: When LP399 downloads [phone_ver.dat] file completely, it will compare the [CPU] information with current version. If the current version is older than Server's one, there will display a [Found New S/W] message on LCD from LP399 Phone.

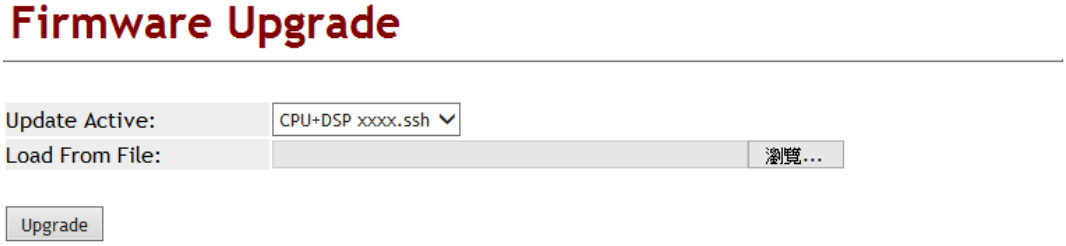
Step 5: If you want to perform upgrade firmware feature directly, Please press **[MENU]** key to enter settings menu, Select [6. Administrator→ 2. Upgrade System→1. Upgrade Now→ 1. Yes] project and enforcement firmware upgrade.

2.9.4. Firmware (Firmware Upgrade)

2.9.4.1. Functions

Provide type ssh to update.

2.9.4.2. Instruction

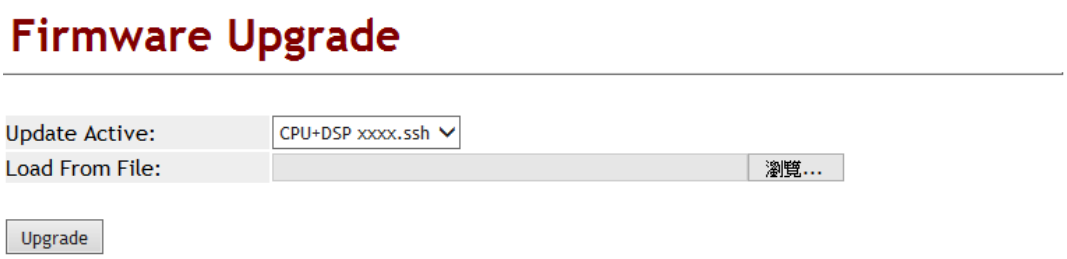


Item	Explanation
Update Active	Default: CPU+DSP xxxx.ssh; Upgrade file format.
Load From File	The location of the updating file.
Upgrade [Button]	Execute updating firmware.

Note：It takes about 2~3 minutes when LP399 is updating firmware. Please do not turn off power adapter during updating firmware and you can not make any call either.

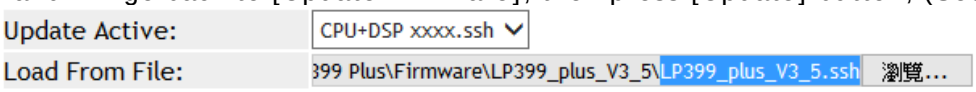
2.9.4.3. Operate Instruction

Step 1: In [Firmware Upgrade] web page, please press [select] to choose the location of the updating file, (see Figure 1).



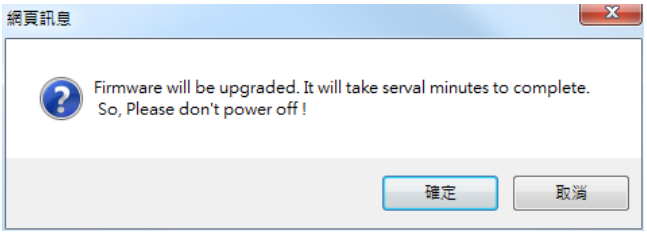
(Figure 1)

Step 2: Enter the page of [select file], select the updating file (Example: voip.ssh), press [open] button and will go back to [Update Firmware], then press [Update] button, (See Figure 2).



(Figure 2)

Step 3: There will show a [Note], it tells you some messages that you should not do them during the updating firmware. When you are sure of these notes very clear, please press [OK] button to close the [Note]. Then LP399 will start to update firmware, (see Figure 3).



(Figure 3)

Step 4: There will show a page of [Note Information], it tells you the system is updating and it will reboot automatically as updating completely (See Figure 4).

(Figure 4)

2.9.5. Advanced (Advanced Settings)

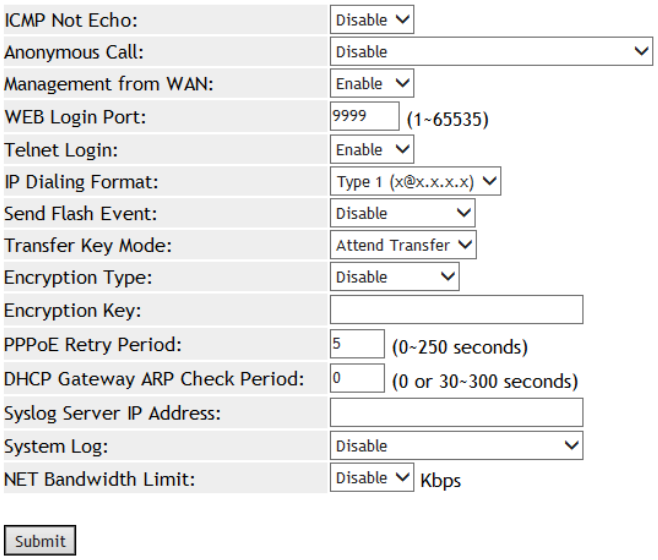
2.9.5.1. Functions

Provide functions to set up Send Anonymous CID, Billing Signal, Send Flash Event, Encryption and Syslog.

2.9.5.2. Instruction

Figure 1: LP399 Device

Management - Advanced Setting


ICMP Not Echo: Disable
Anonymous Call: Disable
Management from WAN: Enable
WEB Login Port: 9999 (1~65535)
Telnet Login: Enable
IP Dialing Format: Type 1 (x@x.x.x.x)
Send Flash Event: Disable
Transfer Key Mode: Attend Transfer
Encryption Type: Disable
Encryption Key:
PPPoE Retry Period: 5 (0~250 seconds)
DHCP Gateway ARP Check Period: 0 (0 or 30~300 seconds)
Syslog Server IP Address:
System Log: Disable
NET Bandwidth Limit: Disable Kbps
Submit

(Figure 1)

Item	Explanation
ICMP Not Echo	Default: Disable; When this function was set up “Enable”, LP399 will not responseto the message of ping. Provide options: Disable, Enable.
Anonymous Call	Default: Disable; When this function was set up Type 1/Type 2, LP399 will use the anonymous Caller ID. Provide options: Disable, Type 1 (anonymous@anonymous.invalid), Type 2 (anonymous@x.x.x.x) 。 *This function must be supported from SIP Server.
Management from WAN	Default: Enable; Allow users login system from WAN Port. When this function was set up Disable, users can only login LP399 from LAN Port. Provide options: Disable, Enable.
WEB Login Port	Default: 9999; set up web login port location. This column can only enter numbers; maximum length is 5 bytes with a range of 1~65535.
Telnet Login	Default: Enable; Allows using Telnet to login system. If the setting is disable, User can’t use Telnet to login LP399. Provide drop-down options: Disable, Enable.
IP Dialing Format	Default: Type 1 (x@x.x.x.x); When this function was set up Disable, LP399 can not dial IP. Provide options: Disabled, Type 1 (x@x.x.x.), Type 2 (x.x.x.x).
Send Flash event	Default: Disable; Send the type of call waiting. When a user presses [Hook/Flash (Transfer)] on LP399, it will send out event messages depending on the type of user selected to the other side. Provide options: Disable, DTMF Event, SIP Info. Disable: Send out [SIP/DSP, Content-Type=applicatio-sdp]. DTMF Event: Send out [RTP event, Payload type=RTP event Flash]. SIP Info: Send out [SIP, Request: INFO sip:xxx@xxxx], [Message Body Signal=16, Duration=250].
Transfer Key Mode	Default: Attend Transfer; The settings have two method that can support server or other IP-phone for transfer action.
Encrypt Type	Default: Disable; Set up SIP encrption type. When this function is on, system will send out encryption information according to encryption type.

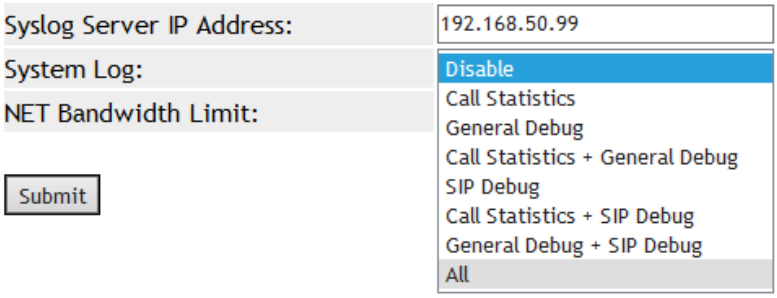
Item	Explanation
	Provide options: Disable, Welltech, AVS, WALKERSUN1, WALKERSUN2, CSF1, CSF2, GX, VGX, RC4, VOS_R, VGCP. *This function must be supported by SIP Server.
Encrypt Key	Set up encryption key. Some encryption type will ask you to enter the keys to encrypt the information. This column can enter numbers or strings; maximum length is 63 bytes. *This function must be supported by SIP Server.
PPPoE Retry Period	Default: 5; When LP399 failed to connect PPPoE, it will wait for several seconds and try to connect PPPoE again. This column can only enter numbers; maximum length is 3 bytes with a range of 5~255(seconds).
DHCP Gateway ARP Check Period	Default: 0; When use DHCP mode to get IP address, How often to check default gateway there. This column can only enter numbers; If the parameter is 0, that mean disable this feature. Maximum length is 3 bytes with a range of 30~300(seconds).
Syslog Server IP Address	Set up Syslog address; The Syslog Server will receive Debug Log from LP399. This column can enter numbers or strings with the type of xxx.xxx.xxx.xxx; maximum length is 63 bytes.
System Log	Default: Disable; Provide options: Disable, Call Statistics, General Debug, Call Statistics, General Debug, SIP Debug, Call Statistics + SIP Debug, General Debug + SIP Debug, All.
NET Bandwidth Limit	Default: Disable; Set up the transmission limit through LAN Port. When this function is on, LP399 will limit the transmission through LAN Port according to the option. Provide options: Disable, 128, 256, 512, 1024, 2048, 4096, 8192(Kbps).
Submit [Button]	Save the settings.

2.9.5.3. Operate Instruction

Example 1: System Log (Please Start TFTP or System Log Server)

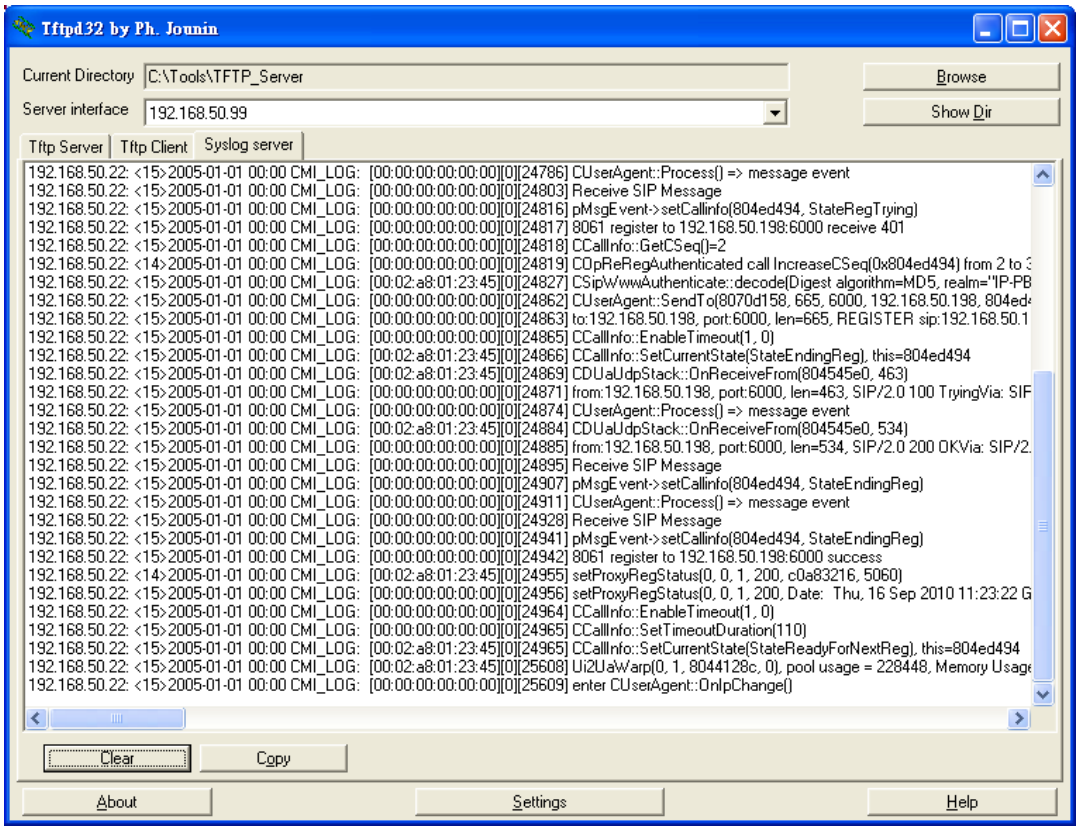
◆ System Log Type: All

Step 1: In [Management - Advanced Setting] web page, Set up [System Log Server: 192.168.50,99, System Log Type: All] (See Figure 1).



(Figure 1)

Step 2: In [TFTP]'s [Syslog server] web page, this page show log message data (See Figure 2).

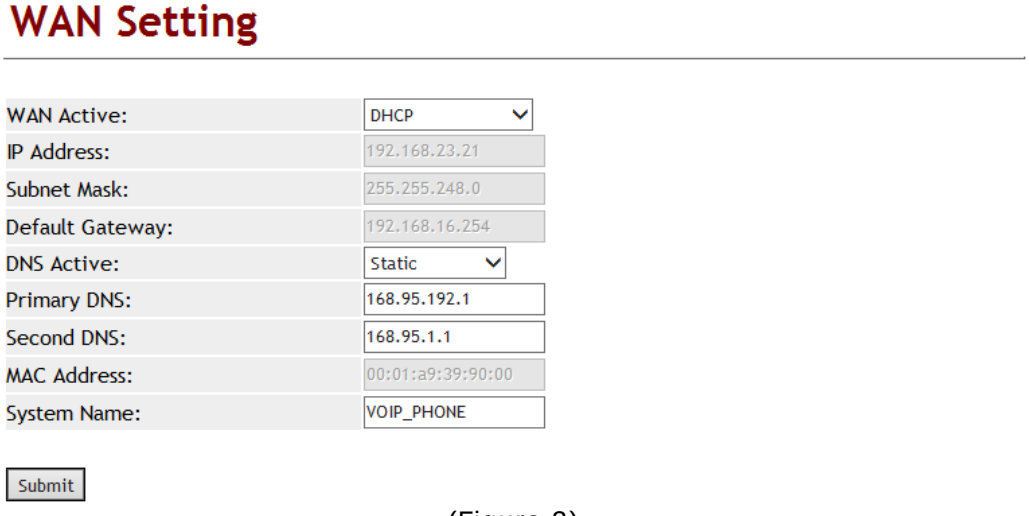


(Figure 2)

Note: User can use ethereal capture to check syslog data.

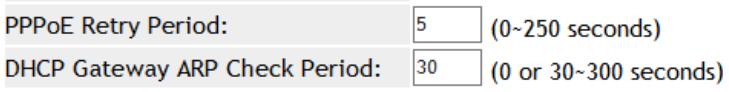
Example 2: DHCP Gateway ARP Check Period

Step 1: In [WAN Setting] web page, Set up [WAN Active: DHCP] (See Figure3).



(Figure 3)

Step 2: In [Management - Advanced Setting] web page, Set up [DHCP Gateway ARP Check Period: 30] (See Figure 4).



(Figure 4)

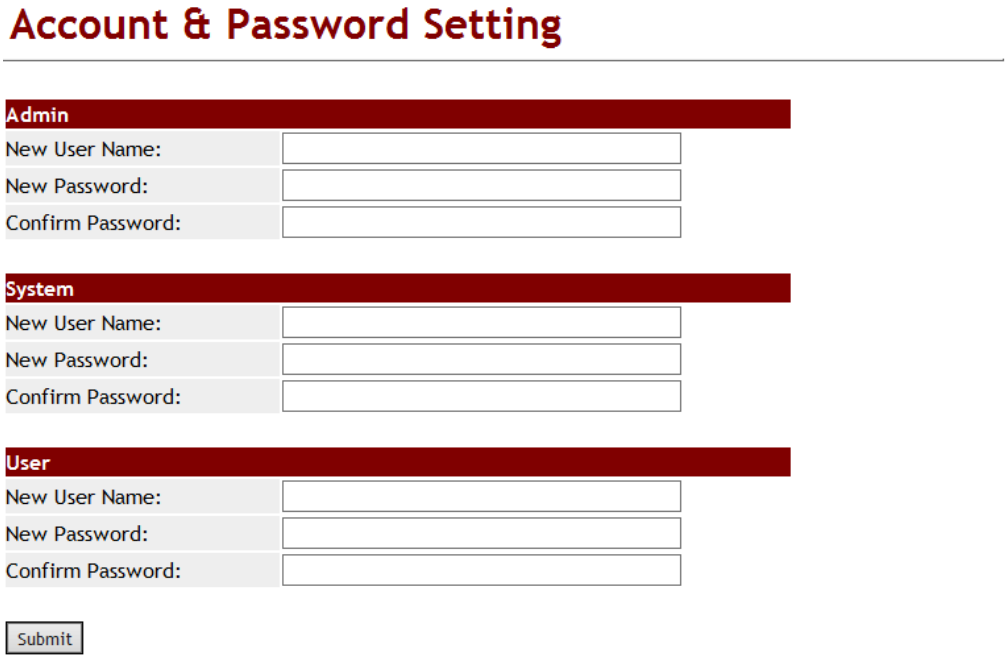
2.9.6. Password (Change Login Account)

2.9.6.1. Functions

Password Provides 3 Authority functions to change their User name and Password, respectively.

2.9.6.2. Instruction

Figure 1: Admin

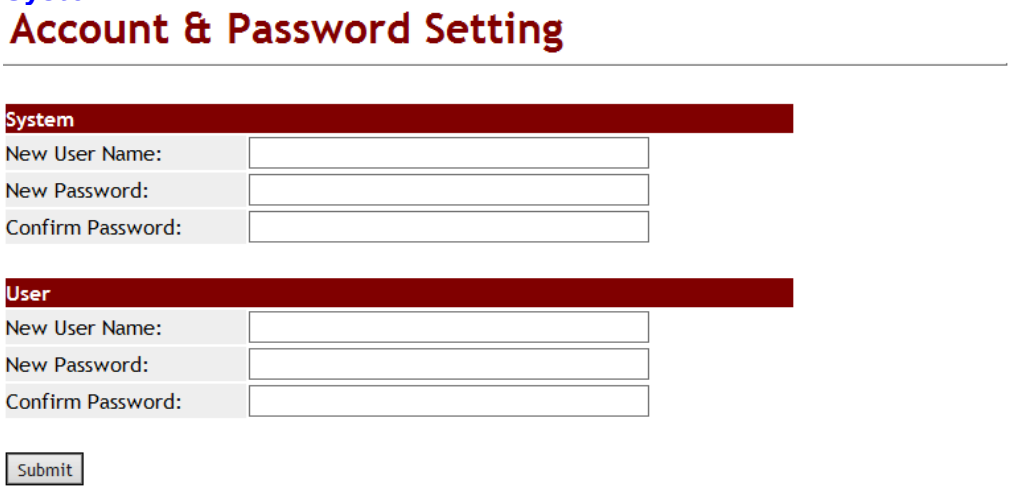


(Figure 1)

Item	Explanation
Admin	Administrator (the highest authority): it can only Set up an Administrator account. Default Username: admin, default password: admin
New User Name	Enter new user name, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, *, #, .); maximum length is 32 bytes.
New Password	Enter new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Confirmed Password	Confirm new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
System	System (the middle authority): it can only Set up a System account. Default Username: system, default password: system
New User Name	Enter new user name, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, *, #, .); maximum length is 32 bytes.
New Password	Enter new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Confirmed Password	Confirm new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
User	Normal User (the lowest authority): it can only Set up a Normal User account. Default Username: user, default password: user
New User Name	Enter new user name, This column can enter numbers or strings

Item	Explanation
	(support: 0~9, a~z, @, _, -, *, #, .); maximum length is 32 bytes.
New Password	Enter new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Confirmed Password	Confirm new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Submit [Button]	Save the Settings.

Figure 2: System



(Figure 2)

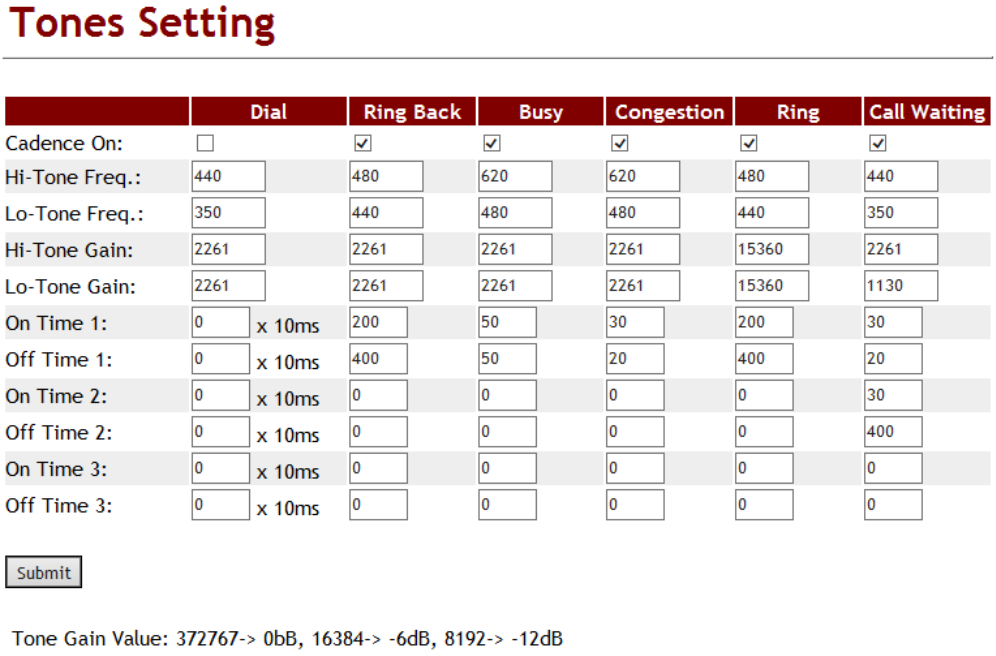
Item	Explanation
System	System (the middle authority): it can only Set up a System account. Default Username: system, default password: system
New User Name	Enter new user name, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, *, #, .); maximum length is 32 bytes.
New Password	Enter new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Confirmed Password	Confirm new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
User	Normal User (the lowest authority): it can only Set up a Normal User account. Default Username: user, default password: user
New User Name	Enter new user name, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, *, #, .); maximum length is 32 bytes.
New Password	Enter new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Confirmed Password	Confirm new user password, This column can enter numbers or strings (support: 0~9, a~z, @, _, -, ., +, :, [,], *, #, !, %); maximum length is 32 bytes.
Submit [Button]	Save the Settings.

2.9.7. Tones (Audio Frequency Set up)

2.9.7.1. Functions

Tones Provide functions to set up Dial, Ring Back, Busy, Congestion, Ring, Call Waiting Tone, Dual Tone, Multi-Frequency.

2.9.7.2. Instruction



Item	Explanation
Dial Tone	Set up the Dial Tone Settings.
Cadence On	Default: Disable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 440; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096. This is high frequency tone.
Lo-Tone Freq	Default: 350; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096. This is low frequency tone.
Hi-Tone Gain	Default: 4522; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535. ◦
On Time 1	Default: 0; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms). ◦
Off Time 1	Default: 0; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
On Time 2	Default: 0; Set up the second category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Off Time 2	Default: 0; Set up the second category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms). ◦
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Ring Back	Set up the Ring Back Tone Settings
Cadence On	Default: Enable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 480; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Lo-Tone Freq	Default: 440; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.

Item	Explanation
Hi-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
On Time 1	Default: 200; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Off Time 1	Default: 400; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
On Time 2	Default: 0; Set up the second category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Off Time 2	Default: 0; Set up the second category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~999 (10ms).
Busy	Set up the Busy Tone Settings
Cadence On	Default: Enable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 620; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Lo-Tone Freq	Default: 480; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Hi-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.。
On Time 1	Default: 50; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 1	Default: 50; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 2	Default: 0; Set up the second category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 2	Default: 0; Set up the second category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).。
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Congestion	Set up the Congestion Tone Settings.
Cadence On	Default: Enable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 620; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Lo-Tone Freq	Default: 480; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.

Item	Explanation
Hi-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
On Time 1	Default: 30; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 1	Default: 20; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 2	Default: 0; Set up the secondsond category of time start. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 2	Default: 0; Set up the second category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Ring	Set up the Ring Tone Settings.
Cadence On	Default: Enable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 480; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Lo-Tone Freq	Default: 440; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Hi-Tone Gain	Default: 15360; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 15360; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.。
On Time 1	Default: 200; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 1	Default: 400; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 2	Default: 0; Set up the second category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 2	Default: 0; Set up the secondsond category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Call Waiting	Set up the Call Waiting Tone Settings.
Cadence On	Default: Enable; When check the box, Cadence On will Enable.
Hi-Tone Freq	Default: 440; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.
Lo-Tone Freq	Default: 350; This column can only enter numbers; maximum length is 4 bytes with a range of 0~4096.

Item	Explanation
Hi-Tone Gain	Default: 2261; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
Lo-Tone Gain	Default: 1130; This column can only enter numbers; maximum length is 5 bytes with a range of 0~65535.
On Time 1	Default: 30; Set up the first category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 1	Default: 20; Set up the first category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 2	Default: 30; Set up the secondsond category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 2	Default: 400; Set up the secondsond category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
On Time 3	Default: 0; Set up the third category of ON time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Off Time 3	Default: 0; Set up the third category of OFF time. This column can only enter numbers; maximum length is 3 bytes with a range of 0~ 999 (10ms).
Submit [Button]	Save the Settings.

2.9.8. Default (Reset to Default)

2.9.8.1. Functions

Default Provides the way of eliminating all Settings and reloading the default Settings except the data of Phone Book.

2.9.8.2. Instruction

Item	Explanation
Reset [Button]	Clear all Setting and reset to default, Then reboot system automatically.
Export [Button]	[Export] button, Provide device configuration back up. Default file name is config.db.
Restore [Button]	Provide restore feature, Import file format is .db.

Note: If user use [Update.htm] web page's [Restore Configuration] to upload [config.db] file, it can't clear configuration from this feature.

2.9.8.3. Operate Instruction

Example 1: Export System Configuration

Step 1: Please finish the Web parameter Set up, Then reboot LP399.

Step 2: In [Reset to Default] web page, Press [Export System Configuration]'s [Export] button

(See Figure 1).

(Figure 1)

Step 3: Enter [Save File] menu, Default file name is config.db, press [Save] button, Save the system parameter to .db file (See Figure 2).

(Figure 2)

Example 2: Restore Setting

Step 1: In [Reset to Default] web page, Press [Browse] button. After choosing the configuration file, Press [Open] button. Return [Reset to Default] web page, make sure to perform the update, Press [Restore] button (See Figure 3).

(Figure 3)

Step 2: Restore complete, Must save setting and reboot system (See Figure 4), Reboot system can take effect the [config.db] parameter.

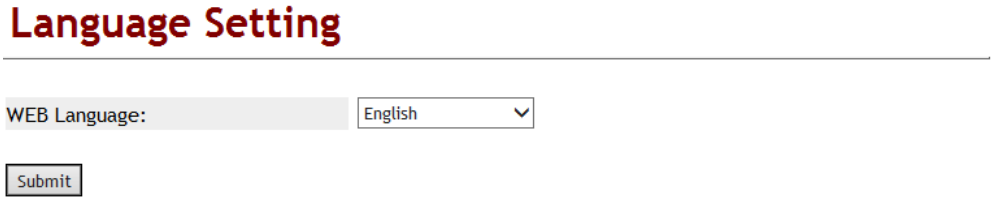
(Figure 4)

2.9.9. Language

2.9.9.1. Functions

Provide LP399 web page's language, When press [Submit] button, Please wait a few seconds (About 5~10 seconds). LP399 will show your desire language automatically.

2.9.9.2. Instruction



Item	Explanation
Web Language	Default: English. Set up web page language, change any language must wait for a while. Provide drup-down options: English, Chinese, Simplified Chinese, Portuguese.
Submit [Button]	Save the Settings.

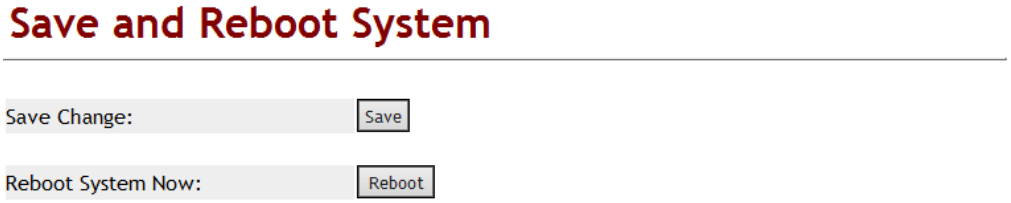
2.10. Save & Reboot

Save & Reboot Provide functions to save all Settings and restart LP399 IP Phone.

2.10.1. Functions

Save Change: Save all Settings and restart LP399.
Reboot System: Restart the system.

2.10.2. Instruction



Item	Explanation
Save [Button]	Save all Settings and restart device.
Reboot [Button]	Restart device.

2.11. Logout (Logout System)

2.11.1. Functions

Provide to logout LP399 webpage Settings menu; Return web page login.

2.11.2. Instruction

Item	Explanation
Logout [Button]	Logout system Settings menu; Return web page login.

--- The End ---